



City of High Point

Meeting Agenda

Finance Committee

Municipal Office Building
211 S. Hamilton Street
High Point, NC 27260

Mayor Pro Tempore Britt Moore, Chair
Committee Members:
Monica Peters
Michael Holmes
Tim Andrew

Cyril Jefferson, Mayor (Alternate)

Thursday, July 17, 2025

4:00 PM

Council Chambers

Finance Committee - Mayor Pro Tempore Britt W. Moore, Chair

CALL TO ORDER

PRESENTATION OF ITEMS

- 2025-272 **Consideration of an Agreement with The Ferguson Group, LLC**
City Council is requested to approve an agreement with The Ferguson Group, LLC in an amount not to exceed \$97,610 and authorize the appropriate City Official to execute all necessary documents.
- 2025-273 **Consideration of a Contract with KS State Bank**
City Council is requested to consider a five-year contract with KS State Bank with an annual amount of \$431,131.54 for the replacement of three end-of-life Nutanix hyperconverged clusters and authorize the appropriate City Official(s) to execute all necessary documents.
- 2025-274 **Consideration of a Purchase from Excel Truck Group**
City Council is requested to consider a purchase from Excel Truck Group in the amount of \$449,532 for two (2) Freightliner 108SD dump trucks, declare the current trucks as surplus and dispose of them through the online auction process, and authorize the appropriate City Official(s) to execute all necessary documents.
- 2025-275 **Consideration of a Purchase from Altec Industries**
City Council is requested to consider a purchase from Altec Industries in the amount of \$322,313 for a Freightliner M2-106

bucket truck, declare the current truck as surplus and dispose of it through the online auction process, and authorize the appropriate City Official(s) to execute all necessary documents.

- 2025-276 **Consideration of a Purchase from Piedmont Truck Center - Ford F550**
City Council is requested to consider a purchase from Piedmont Truck Center in the amount of \$153,583.46 for a Ford F550 truck, declare the current truck as surplus and dispose of it through the online auction process, and authorize the appropriate City Official(s) to execute all necessary documents.
- 2025-277 **Consideration of a Purchase from Piedmont Truck Center - Side Loading Refuse Trucks**
City Council is requested to consider a purchase from Piedmont Truck Center in the amount of \$1,245,886.92 for (3) side loading refuse trucks, declare the current trucks as surplus and dispose of them through the online auction process, and authorize the appropriate City Official(s) to execute all necessary documents.
- 2025-279 **Consideration of a Contract with Housing Consultants Group**
City Council is requested to consider a contract with Housing Consultants Group in the amount of \$99,700 for the administration of the Affordable Housing Program and authorize the appropriate City Official(s) to execute all necessary documents.
- 2025-297 **Consideration of a Contract with Community Housing Solutions**
City Council is requested to consider a contract with Community Housing Solutions in the amount of \$100,000 for operational expenses associated with the Operation Inasmuch event for Fall 2025 and authorize the appropriate City Official(s) to execute all necessary documents.
- 2025-286 **Consideration of a Reimbursement Agreement with AT&T Enterprises, LLC**
City Council is requested to consider a reimbursement agreement with AT&T Enterprises, LLC in the amount of \$373,005.69 for relocation of fiber optic cables and authorize the appropriate City Official(s) to execute all necessary documents.
- 2025-287 **Consideration of a Contract with Jobsite Technologies, Inc.**
City Council is requested to consider a contract with Jobsite Technologies, Inc. in the amount of \$124,795.00 for the purchase and installation of two (2) GPS units for landfill compactors and authorize the appropriate City Official(s) to execute all necessary

documents.

- 2025-284 **Consideration of a Task Order with Hazen - Condition and Operational Assessment**
City Council is requested to consider a task order with Hazen in the amount of \$350,000 for professional engineering services for a condition and operational assessment for the Eastside Wastewater Treatment Plant and authorize the appropriate City Official(s) to execute all necessary documents.
- 2025-285 **Consideration of a Task Order with Hazen - Tertiary Filtration Study**
City Council is requested to consider a task order with Hazen in the amount of \$140,000 for professional engineering services for a tertiary filtration study for the Eastside Wastewater Treatment Plant and authorize the appropriate City Official(s) to execute all necessary documents.
- 2025-288 **Consideration of a Task Order with HDR Engineering, Inc. - Shadybrook Lift Station**
City Council is requested to consider a task order with HDR Engineering, Inc. in the amount of \$2,106,000 for professional engineering services for the design of the Shadybrook Lift Station and sanitary sewer system and authorize the appropriate City Official(s) to execute all necessary documents.
- 2025-300 **Consideration of a Task Order with HDR Engineering, Inc. - Ward Water Plant Filters Rehabilitation Project**
City Council is requested to consider a task order with HDR Engineering, Inc. in the amount of \$736,500 for professional engineering services for contract administration and resident project representation for the Ward Water Plant Filters Rehabilitation Project and authorize the appropriate City Official(s) to execute all necessary documents.
- 2025-289 **Consideration of a Contract Amendment with Evergreen Solutions**
City Council is requested to consider a contract with Evergreen Solutions in the amount of \$117,000 for the completion of Phase II of the Classification & Compensation Study and authorize the appropriate City Official(s) to execute all necessary documents.
- 2025-290 **Consideration of Right of Entry and Release and Deed of No Build Easement**
City Council is requested to consider a Right of Entry and Release and a Deed of No Build Easement to allow for redevelopment of Showplace West and authorize the appropriate

City Official(s) to execute all necessary documents.

2025-291 **Consideration of a Purchase from Vista Outdoor DBA Kiesler Police Supply**

City Council is requested to consider a purchase from Vista Outdoor DBA Kiesler Police Supply in the amount of \$134,763 for training and duty ammunition for Fiscal Year 2025-2026 and authorize the appropriate City Official(s) to execute all necessary documents.

2025-295 **Consideration of a Contract with Mental Health Associates of the Triad**

City Council is requested to consider a contract with Mental Health Associates of the Triad in the amount of \$156,344.18 for contracted social work support services at the library and authorize the appropriate City Official(s) to execute all necessary documents.

2025-292 **Consideration of Funding for Outside Non-Profit Organizations - High Point Schools Partnership**

City Council is requested to modify its approval of \$15,000 to High Point Schools Partnership as an affiliate of the Resilience High Point.

ADJOURNMENT

CITY OF HIGH POINT

AGENDA ITEM



TITLE: Consideration of an Agreement with The Ferguson Group, LLC

FROM:
Jeron Hollis
Managing Director

MEETING DATE:
July 17, 2025

PUBLIC HEARING:
No

ADVERTISED DATE/BY:
N/A

ATTACHMENTS:
None

PURPOSE: Approval of an agreement with The Ferguson Group, LLC as the City's Washington Lobbyist in an amount not to exceed \$97,610. This agreement is for the period beginning on July 1, 2025, and ending on June 30, 2026.

BACKGROUND: The Ferguson Group has represented the City for over 20 years, providing consistent and strategic federal advocacy. Under the leadership of Jennifer Imo, their team has been instrumental in helping to secure nearly \$12 million in key federal funding since FY 2022, supporting critical infrastructure, public safety, economic development, and community development initiatives. Their strong relationships with Senate and House staff have also been essential in navigating grant applications, securing letters of support, and working effectively with federal agencies.

BUDGET IMPACT: Funds are available in the FY 2025-2026 Budget.

RECOMMENDED ACTION REQUESTED: City Council is requested to approve an agreement with The Ferguson Group, LLC in an amount not to exceed \$97,610 and authorize the appropriate City Official to execute all necessary documents.

CITY OF HIGH POINT

AGENDA ITEM



TITLE: Consideration of a Contract with KS State Bank

FROM:

Adam Ward
Director of IT Services

MEETING DATE:

July 17, 2025

PUBLIC HEARING:

No

ADVERTISED DATE/BY:

N/A

ATTACHMENTS:

1. Quotes - Ark Technology Consultants
 2. Exhibit B
-

PURPOSE: To replace three end-of-life Nutanix hyperconverged clusters that underpin core City services and 911 emergency dispatch, ensuring uninterrupted access for citizens to online utilities, permitting, records and public safety systems.

BACKGROUND: Our current Nutanix clusters—powering online billing, permitting, public portals and our 911 dispatch system—are end-of-life and unsupported, risking outages that disrupt citizen services and compromise data protection. Replacing them with three new clusters (each paired with a DR counterpart for real-time replication and rapid failover) restores vendor support, boosts performance, and guarantees uninterrupted access to the systems our community relies on—and the lease carries an annual payment of \$431,131.54 each year for five years. This purchase will occur under purchasing contract NCPA #01-169.

BUDGET IMPACT: Funds are available in the FY 2025-2026 Budget.

RECOMMENDED ACTION REQUESTED: City Council is requested to consider a five-year contract with KS State Bank with an annual amount of \$431,131.54 for the replacement of three end-of-life Nutanix hyperconverged clusters and authorize the appropriate City Official(s) to execute all necessary documents.

**Ark Technology Consultants**

960B Harvest Drive
Suite 250
Blue Bell, PA 19422

Document Number:	5STQ2815
Date:	5/22/2025
Expiration Date:	7/27/2025

Bill To:

City of High Point
211 South Hamilton Street
High Point, NC 27260

Ship To:

City of High Point
211 South Hamilton Street
High Point, NC 27260

Qty	Item Number	Description	Price	Extended Price
0		NCPA contract # 01-169	\$0.00	\$0.00
8	NX-8170-G9-6526Y-CM	NX-8170-G9, 1 Node; 2x Intel Xeon-Gold 6526Y processor (2.8 GHz/ 16-core/ 195W,Emerald Rapids) per node NTE: \$10,505.14	\$10,505.14	\$84,041.12
128	C-MEM-96GB-5600-CM	96GB Memory Module (5600MHz DDR5 RDM) NTE: \$610.43	\$364.86	\$46,702.08
96	C-NVM-7.68TB-B-CM	7.68 TB NVMe SSD NTE: \$1,004.50	\$1,004.50	\$96,432.00
8	C-LOM-10G2D1BT-CM	LOM Module: Broadcom 10GbE, 2-port, Base-T NIC (BCM 57416) NTE: \$266.40	\$266.40	\$2,131.20
8	C-NIC-10G2D1BT-CM	SMC 10GbE, 2-port, Base-T NIC (BCM57416) NTE: \$331.40	\$331.40	\$2,651.20
16	C-PWR-4FC13C14B-CM	C13/C14, 15A, 4ft Power cord NTE: \$18.53	\$18.53	\$296.48
8	C-TPM-2.0-U-CM	TPM 2.0 Module Unprovisioned NTE: \$73.35	\$73.35	\$586.80
8	NX-8170-G9-6526Y-CM	NX-8170-G9, 1 Node; 2x Intel Xeon-Gold 6526Y processor (2.8 GHz/ 16-core/ 195W,Emerald Rapids) per node NTE: \$10,505.14	\$10,505.14	\$84,041.12
128	C-MEM-96GB-5600-CM	96GB Memory Module (5600MHz DDR5 RDM) NTE: \$610.43	\$364.86	\$46,702.08
96	C-NVM-7.68TB-B-CM	7.68 TB NVMe SSD NTE: \$1,004.50	\$1,004.50	\$96,432.00

Qty	Item Number	Description	Price	Extended Price
8	C-LOM-10G2D1BT-CM	LOM Module: Broadcom 10GbE, 2-port, Base-T NIC (BCM 57416) NTE: \$266.40	\$266.40	\$2,131.20
8	C-NIC-10G2D1BT-CM	SMC 10GbE, 2-port, Base-T NIC (BCM57416) NTE: \$331.40	\$331.40	\$2,651.20
16	C-PWR-4FC13C14B-CM	C13/C14, 15A, 4ft Power cord NTE: \$18.53	\$18.53	\$296.48
8	C-TPM-2.0-U-CM	TPM 2.0 Module Unprovisioned NTE: \$73.35	\$73.35	\$586.80
256	SW-NCI-PRO-PR	Subscription, Nutanix Cloud Infrastructure (NCI) Pro Software License & Production Software Support Service for 1 CPU Core NTE: \$2,123.66	\$2,123.66	\$543,656.96
60	TERM-MONTHS	Term in months	\$0.00	\$0.00
60	TERM-MONTHS	Term in months	\$0.00	\$0.00
256	SW-NCM-STR-PR	Subscription, Nutanix Cloud Manager (NCM) Starter Software License & Production Software Support Service for 1 CPU Core NTE: \$357.70	\$357.70	\$91,571.20
60	TERM-MONTHS	Term in months	\$0.00	\$0.00
8	S-HW-PRD	24/7 Production Level HW Support for Nutanix HCI appliance NTE: \$5,290.77	\$4,194.00	\$33,552.00
60	SUPPORT-TERM	Support Term in Months	\$0.00	\$0.00
256	SW-NCI-PRO-PR	Subscription, Nutanix Cloud Infrastructure (NCI) Pro Software License & Production Software Support Service for 1 CPU Core NTE: \$2,123.66	\$2,123.66	\$543,656.96
60	TERM-MONTHS	Term in months	\$0.00	\$0.00
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60	SUPPORT-TERM	Support Term in Months	\$0.00	\$0.00

Qty	Item Number	Description	Price	Extended Price
1	PLATFORM INTEGRATION	Platform Integration Fee	\$0.00	\$0.00
1	PLATFORM INTEGRATION	Platform Integration Fee	\$0.00	\$0.00
1		FREIGHT-OUT CHARGE	\$4,400.00	\$4,400.00
1		Executive Discount	-\$295,142.08	-\$295,142.08

Tax will be done with lease company.

SubTotal	\$1,512,500.00
Tax	\$0.00
Shipping	Actuals will be invoiced

TOTAL \$1,512,500.00

Accepted By: _____

Accepted Date: _____

**Ark Technology Consultants**

960B Harvest Drive
Suite 250
Blue Bell, PA 19422

Document Number:	5STQ2816
Date:	5/22/2025
Expiration Date:	7/27/2025

Bill To:

City of High Point
211 South Hamilton Street
High Point, NC 27260

Ship To:

City of High Point
211 South Hamilton Street
High Point, NC 27260

Qty	Item Number	Description	Price	Extended Price
0		NCPA contract # 01-169	\$0.00	\$0.00
3	NX-1175S-G9-6542Y-CM	NX-1175S-G9, 1 Node; 1x Intel Xeon-Gold 6542Y processor (2.9 GHz/ 24-core/ 250W,Emerald Rapids) per node NTE: \$8,051.12	\$8,051.12	\$24,153.36
24	C-MEM-64GB-5600-CM	64GB Memory Module (5600MHz DDR5 RDM) NTE: \$364.86	\$206.76	\$4,962.24
6	C-NVM-7.68TB-B-CM	7.68 TB NVMe SSD NTE: \$1,004.50	\$1,004.50	\$6,027.00
6	C-NIC-10G2D1BT-CM	SMC 10GbE, 2-port, Base-T NIC (BCM57416) NTE: \$331.40	\$331.40	\$1,988.40
6	C-PWR-4FC13C14A-CM	C13/C14, 10A, 4ft Power cord NTE: \$19.56	\$19.56	\$117.36
3	C-TPM-2.0-U-CM	TPM 2.0 Module Unprovisioned NTE: \$73.35	\$73.35	\$220.05
72	SW-NCI-PRO-PR	Subscription, Nutanix Cloud Infrastructure (NCI) Pro Software License & Production Software Support Service for 1 CPU Core NTE:	\$2,123.66	\$152,903.52
60	TERM-MONTHS	Term in months	\$0.00	\$0.00
72	SWA-NCI-ADR-PR	Subscription, Nutanix Cloud Infrastructure (NCI) Advanced Replication add-on Software License & Production Software Support Service for 1 CPU Core NTE:	\$261.66	\$18,839.52
60	TERM-MONTHS	Term in months	\$0.00	\$0.00

Qty	Item Number	Description	Price	Extended Price
72	SW-NCM-STR-PR	Subscription, Nutanix Cloud Manager (NCM) Starter Software License & Production Software Support Service for 1 CPU Core NTE:	\$357.70	\$25,754.40
60	TERM-MONTHS	Term in months	\$0.00	\$0.00
3	S-HW-PRD	24/7 Production Level HW Support for Nutanix HCI appliance NTE:	\$2,013.09	\$6,039.27
60	SUPPORT-TERM	Support Term in Months	\$0.00	\$0.00
1	PLATFORM INTEGRATION	Platform Integration Fee	\$0.00	\$0.00
1		FREIGHT-OUT CHARGE	\$825.00	\$825.00
1		Executive Discount	-\$13,830.12	-\$13,830.12

Tax will be done with lease company.

SubTotal	\$228,000.00
Tax	\$0.00
Shipping	Actuals will be invoiced

TOTAL \$228,000.00

Accepted By: _____

Accepted Date: _____

**Ark Technology Consultants**

960B Harvest Drive
Suite 250
Blue Bell, PA 19422

Document Number:	5STQ2817
Date:	5/22/2025
Expiration Date:	7/27/2025

Bill To:

City of High Point
211 South Hamilton Street
High Point, NC 27260

Ship To:

City of High Point
211 South Hamilton Street
High Point, NC 27260

Qty	Item Number	Description	Price	Extended Price
0		NCPA contract # 01-169	\$0.00	\$0.00
3	NX-1175S-G9-6542Y-CM	NX-1175S-G9, 1 Node; 1x Intel Xeon-Gold 6542Y processor (2.9 GHz/ 24-core/ 250W, Emerald Rapids) per node NTE: \$8,051.12	\$8,051.12	\$24,153.36
24	C-MEM-64GB-5600-CM	64GB Memory Module (5600MHz DDR5 RDM) NTE: \$364.86	\$206.76	\$4,962.24
6	C-NVM-7.68TB-B-CM	7.68 TB NVMe SSD NTE: \$1,004.50	\$1,004.50	\$6,027.00
6	C-NIC-10G2D1BT-CM	SMC 10GbE, 2-port, Base-T NIC (BCM57416) NTE: \$331.40	\$331.40	\$1,988.40
6	C-PWR-4FC13C14A-CM	C13/C14, 10A, 4ft Power cord NTE: \$19.56	\$19.56	\$117.36
3	C-TPM-2.0-U-CM	TPM 2.0 Module Unprovisioned NTE: \$73.35	\$73.35	\$220.05
72	SW-NCI-PRO-PR	Subscription, Nutanix Cloud Infrastructure (NCI) Pro Software License & Production Software Support Service for 1 CPU Core NTE:	\$2,123.66	\$152,903.52
60	TERM-MONTHS	Term in months	\$0.00	\$0.00
72	SWA-NCI-ADR-PR	Subscription, Nutanix Cloud Infrastructure (NCI) Advanced Replication add-on Software License & Production Software Support Service for 1 CPU Core NTE:	\$261.66	\$18,839.52
60	TERM-MONTHS	Term in months	\$0.00	\$0.00

Qty	Item Number	Description	Price	Extended Price
72	SW-NCM-STR-PR	Subscription, Nutanix Cloud Manager (NCM) Starter Software License & Production Software Support Service for 1 CPU Core NTE:	\$357.70	\$25,754.40
60	TERM-MONTHS	Term in months	\$0.00	\$0.00
3	S-HW-PRD	24/7 Production Level HW Support for Nutanix HCI appliance NTE:	\$2,013.09	\$6,039.27
60	SUPPORT-TERM	Support Term in Months	\$0.00	\$0.00
1	PLATFORM INTEGRATION	Platform Integration Fee	\$0.00	\$0.00
1		FREIGHT-OUT CHARGE	\$825.00	\$825.00
1		Executive Discount	-\$13,830.12	-\$13,830.12

Tax will be done with lease company.

SubTotal	\$228,000.00
Tax	\$0.00
Shipping	Actuals will be invoiced

TOTAL \$228,000.00

Accepted By: _____

Accepted Date: _____

EXHIBIT B

PAYMENT SCHEDULE

RE: Government Obligation Contract dated as of July 30, 2025, between KS StateBank (Obligee) and City of High Point, North Carolina (Obligor)

Date of First Payment:	At Closing
Original Balance:	\$1,968,500.00
Total Number of Payments:	Five (5)
Number of Payments Per Year:	One (1)

Pmt No.	Due Date	Contract Payment	Applied to Interest	Applied to Principal	*Purchase Option Price
1	At Closing	\$431,131.54	\$0.00	\$431,131.54	\$1,509,091.99
2	30-Jul-26	\$431,131.54	\$73,163.35	\$357,968.19	\$1,161,865.96
3	30-Jul-27	\$431,131.54	\$56,127.65	\$375,003.89	\$795,334.17
4	30-Jul-28	\$431,131.54	\$38,281.22	\$392,850.32	\$408,423.21
5	30-Jul-29	\$431,131.54	\$19,585.48	\$411,546.06	\$0.00

By signing below, Obligor acknowledges that its obligation to make the Contract Payments set forth in Exhibit B to the Contract includes repayment of the principal amount of \$1,968,500.00, together with interest at 4.759%.

Furthermore, the amount financed by Obligor is \$1,886,500.00 and such amount is the issue price of this Contract for federal income tax purposes. The difference between the principal amount of this Contract and the issue price is original issue discount, as defined in section 1288 of the Internal Revenue Code of 1986, as amended. The yield of this Contract for federal income tax purposes is 7.151%. Such issue price and yield will be stated in the applicable Form 8038-G.

City of High Point, North Carolina

Signature

Printed Name and Title

*Assumes all Contract Payments due to date are paid

CITY OF HIGH POINT

AGENDA ITEM



TITLE: Consideration of a Purchase from Excel Truck Group

FROM:

Kevin Rogers
Fleet Director

MEETING DATE:

July 17, 2025

PUBLIC HEARING:

No

ADVERTISED DATE/BY:

N/A

ATTACHMENTS:

1. Freightliner 108SD Dumptruck Photo
 2. Bid Recommendation Form
-

PURPOSE: The Streets Division is currently utilizing dump trucks that need replacement based on age and overall condition. Using the NC Sheriff's Association# 26-10-0422 a Freightliner 108SD Plus single axle and double chassis with Godwin Dump Bodies are recommended for council approval.

BACKGROUND: The Streets Division is currently utilizing dump trucks that need to be replaced due to age, condition, and mileage. Excel Truck Group has a 108SD Freightliner Plus single axle and double axle with Godwin Dump Bodies that will continue to meet their needs. The price of \$200,692 for the single axle and the price of \$248,840 for the double axle is for the truck, training, extended warranty, snowplow equipment, and brine tank addition. The total for two (2) trucks is \$449,532. The delivery is estimated at less than 365 days.

BUDGET IMPACT: Funds are available in the FY 2025-2026 Budget.

RECOMMENDED ACTION REQUESTED: City Council is requested to consider a purchase from Excel Truck Group in the amount of \$449,532 for two (2) Freightliner 108SD dump trucks, declare the current trucks as surplus and dispose of them through the online auction process, and authorize the appropriate City Official(s) to execute all necessary documents.



BID RECOMMENDATION

DEPARTMENT: **Fleet Services Department**

COUNCIL AGENDA DATE: **July 21, 2025**

BID NO.: **NC Sheriff's Association** CONTRACT NO.: **26-10-0422** DATE OPEN:

DESCRIPTION:

2025 Freightliner 108SD Plus dump trucks

PURPOSE:

The Streets Division is currently utilizing two (2) dump trucks that needs replacement based on age, condition, and mileage. Using the NC Sheriff's Association# 26-10-0422 one (1) Freightliner 108SD Plus single axle with Godwin dump body and one (1) Freightliner 108SD tandem axle with Godwin dump body are being recommended for Council approval.

COMMENTS:

The price of \$200,692 is for the single axle and \$248,840 is for the tandem axle truck. This also includes training, extended warranty, snowplow equipment, and brine tank addition. Estimated delivery is less than 365 days.

RECOMMEND AWARD TO: **Excel Truck Group** AMOUNT: **\$449,532**

JUSTIFICATION:

Using the bid allows the City of High Point to take advantage of the volume discount offered through the NC Sheriff's Association.

ACCOUNTING UNIT	ACCOUNT	ACTIVITY	CATEGORY	BUDGETED AMOUNT
501271	532401			\$449,532
TOTAL BUDGETED AMOUNT				\$449,532

DEPARTMENT HEAD: **KEVIN ROGERS** Digitally signed by KEVIN ROGERS Date: 2025.06.18 12:26:55 -04'00' DATE: **06/18/2025**

The Purchasing Division concurs with recommendation submitted by the **Fleet Services** and recommends award to the lowest responsible, responsive bidder **Excel Truck Group** in the amount of **\$449,532.00**.

PURCHASING MANAGER: **Candy E Harmon** Digitally signed by Candy E Harmon Date: 2025.06.18 14:59:27 -04'00' DATE: **6/18/2025**

Approved for Submission to Council

FINANCIAL SERVICES DIRECTOR: **Bobby Fitzjohn** Digitally signed by Bobby Fitzjohn Date: 2025.06.18 16:50:36 -04'00' DATE: **6/18/25**

CITY MANAGER: DATE:
(For City Council Approval Only)

CITY OF HIGH POINT

AGENDA ITEM



TITLE: Consideration of a Purchase from Altec Industries

FROM:

Kevin Rogers
Fleet Director

MEETING DATE:

July 17, 2025

PUBLIC HEARING:

No

ADVERTISED DATE/BY:

N/A

ATTACHMENTS:

1. Freightliner M2-106 Bucket Truck Picture
 2. Bid Recommendation Form
-

PURPOSE: The Electric Department is using a 2015 Ford F750 Altec AA-55E bucket truck that needs replacement due to age, mileage, and condition. Using Sourcewell Contract# 110421-ALT a 2026 Freightliner M2-106 Plus chassis with an Altec AA55E bucket has been recommended for Council approval.

BACKGROUND: The Electric Department is currently using a 2015 Ford F750 with Altec AA-55E body. The bucket truck currently has over 100,000 miles on the chassis and very high usage on the bucket assembly. The new 2026 Freightliner M2-106 Plus with Altec AA-55E bucket will continue to meet their needs. The price of \$322,313 is for the truck, training, extended warranty, and delivery. The estimated delivery is less than 365 days.

BUDGET IMPACT: Funds are available in the FY 2025-2026 Budget.

RECOMMENDED ACTION REQUESTED: City Council is requested to consider a purchase from Altec Industries in the amount of \$322,313 for a Freightliner M2-106 bucket truck, declare the current truck as surplus and dispose of it through the online auction process, and authorize the appropriate City Official(s) to execute all necessary documents.



BID RECOMMENDATION

DEPARTMENT: Fleet Services Department

COUNCIL AGENDA DATE: July 21, 2025

BID NO.: Sourcewell Contract CONTRACT NO.: 110421-ALT DATE OPEN:

DESCRIPTION:

Freightliner M2-106 Plus chassis with Altec AA55E Bucket

PURPOSE:

The Electric Department is using a 2015 Ford F750 Altec AA-55E bucket truck that needs replacement due to age and mileage. Using Sourcewell Contract# 110421-ALT a 2026 Freightliner M2-106 Plus chassis with an Altec AA55E bucket has been recommended for Council approval.

COMMENTS:

The price of \$322,313 is for one (1) truck, bucket assembly, extended warranty, training, and delivery. Estimated delivery is less than 365 days.

RECOMMEND AWARD TO: Altec AMOUNT: \$322,313

JUSTIFICATION:

Using the bid allows the City of High Point to take advantage of the volume discount offered through the Sourcewell Contract.

ACCOUNTING UNIT	ACCOUNT	ACTIVITY	CATEGORY	BUDGETED AMOUNT
501271	532401			\$322,313
TOTAL BUDGETED AMOUNT				\$322,313

DEPARTMENT HEAD: KEVIN ROGERS Digitally signed by KEVIN ROGERS
Date: 2025.06.30 11:07:28 -04'00' DATE: 06/30/2025

The Purchasing Division concurs with recommendation submitted by the Fleet Services and recommends
award to the lowest responsible, responsive bidder Altec in the amount of \$322,313.00.

PURCHASING
MANAGER: Candy E Harmon Digitally signed by Candy E Harmon
Date: 2025.06.30 14:17:40 -04'00' DATE: 6/27/2025

Approved for Submission to
Council

FINANCIAL SERVICES DIRECTOR: Bobby Fitzjohn Digitally signed by Bobby Fitzjohn
Date: 2025.07.03 10:05:41 -04'00' DATE: 7/3/25

CITY MANAGER: DATE:
(For City Council Approval Only)

CITY OF HIGH POINT

AGENDA ITEM



TITLE: Consideration of a Purchase from Piedmont Truck Center - Ford F550

FROM:

Kevin Rogers
Fleet Director

MEETING DATE:

July 17, 2025

PUBLIC HEARING:

No

ADVERTISED DATE/BY:

N/A

ATTACHMENTS:

1. Ford F550 Picture
 2. Bid Recommendation Form
-

PURPOSE: The Environmental Services Division is currently using an Isuzu truck with rear packer body that needs replacement due to age and condition. Using the North Carolina State Contract# 2510A a 2025 Ford F550 with Diamond Back 8 Yard body is recommended for council approval.

BACKGROUND: The Environmental Services Division is currently utilizing an Isuzu truck with rear packer body that needs to be replaced due to age, condition, and mileage. Piedmont Truck Center has the Ford F550 truck with Diamond Back 8 Yard Body that will continue to meet their needs. The price of \$153,583.46 is for the truck, body, and training. The delivery is estimated at less than 365 days.

BUDGET IMPACT: Funds are available in the FY 2025-2026 Budget.

RECOMMENDED ACTION REQUESTED: City Council is requested to consider a purchase from Piedmont Truck Center in the amount of \$153,583.46 for a Ford F550 truck, declare the current truck as surplus and dispose of it through the online auction process, and authorize the appropriate City Official(s) to execute all necessary documents.



BID RECOMMENDATION

DEPARTMENT: Fleet Services Department

COUNCIL AGENDA DATE: July 21, 2025

BID NO.: NC State Contract CONTRACT NO.: 2510A DATE OPEN:

DESCRIPTION:

Ford F550 with Diamond Back 8 Yard Body.

PURPOSE:

The Environmental Services Division is currently using an Isuzu truck with a New Way body. The trucks is in need of replacement due to age/condition and escalating repair cost. Using the NC State Contract# 2510A a 2025 Ford F550 truck with Diamond Back 8 Yard body is being recommended for council approval.

COMMENTS:

The price of \$153,583.46 is for the truck, body, operator training, and delivery. Estimated delivery is less than 365 days.

RECOMMEND AWARD TO: Piedmont Truck Center AMOUNT: \$153,583.46

JUSTIFICATION:

Using the bid allows the City of High Point to take advantage of the volume discount offered through the NC State Contract.

ACCOUNTING UNIT	ACCOUNT	ACTIVITY	CATEGORY	BUDGETED AMOUNT
501271	532401			\$153,583.46
TOTAL BUDGETED AMOUNT				\$153,583.46

DEPARTMENT HEAD: KEVIN ROGERS Digitally signed by KEVIN ROGERS Date: 2025.06.18 12:27:48 -04'00' DATE: 06/18/2025

The Purchasing Division concurs with recommendation submitted by the Fleet Services and recommends award to the lowest responsible, responsive bidder Piedmont Truck Center in the amount of \$153,583.46.

PURCHASING MANAGER: Candy E Harmon Digitally signed by Candy E Harmon Date: 2025.06.18 16:51:43 -04'00' DATE: 6/18/25

Approved for Submission to Council

FINANCIAL SERVICES DIRECTOR: Bobby Fitzjohn Digitally signed by Bobby Fitzjohn Date: 2025.07.03 10:27:07 -04'00' DATE: 7/3/25

CITY MANAGER: DATE:
(For City Council Approval Only)

CITY OF HIGH POINT

AGENDA ITEM



TITLE: Consideration of a Purchase from Piedmont Truck Center - Side Loading Refuse Trucks

FROM:
Kevin Rogers
Fleet Director

MEETING DATE:
July 17, 2025

PUBLIC HEARING:
No

ADVERTISED DATE/BY:
N/A

ATTACHMENTS:

1. Side Loading Refuse Truck Picture
 2. Bid Recommendation Form
-

PURPOSE: The Environmental Services Division has three (3) side loading refuse trucks in need of replacement due to age, condition, and hours. Using the NC Sheriffs' Association Procurement contract 26-10-0422, three (3) Dennis Eagle Trucks with New Way Side Loading Refuse bodies from Piedmont Truck Center are being recommended for council approval.

BACKGROUND: The Environmental Services Division is currently using Peterbilt trucks with New Way side loading bodies that have between 9,000-10,000+ hours. These trucks are used for residential garbage collection and need to be replaced due to age and hours. The Dennis Eagle Truck with New Way side loading refuse body configuration is like the units they are currently using and will meet their needs. The price of one (1) truck is \$415,295.64. The total is \$1,245,886.92 which includes three (3) trucks, refuse body installation, extended warranty, training, and delivery. The delivery is estimated at less than 365 days.

BUDGET IMPACT: Funds are available in the FY 2025-2026 Budget.

RECOMMENDED ACTION REQUESTED: City Council is requested to consider a purchase from Piedmont Truck Center in the amount of \$1,245,886.92 for (3) side loading refuse trucks, declare the current trucks as surplus and dispose of them through the online auction process, and authorize the appropriate City Official(s) to execute all necessary documents.



BID RECOMMENDATION

DEPARTMENT: Fleet Services Department

COUNCIL AGENDA DATE: July 21, 2025

BID NO.: NC Sheriff's Association CONTRACT NO.: 26-10-0422 DATE OPEN:

DESCRIPTION:

Dennis Eagle with 31 yard New Way side loading refuse body.

PURPOSE:

The Environmental Services Division is currently using three (3) Peterbilt trucks with New Way side loading refuse bodies that have between 9,000 and 10,000+ hours. These trucks are used daily residential garbage collection and need to be replaced due to age, condition, and hours.

COMMENTS:

The price of \$415,295.64 is for one (1) truck, refuse body installation, extended warranty, training, and delivery. The total cost of three (3) is \$1,245,886.92. Estimated delivery is less than 365 days.

RECOMMEND AWARD TO: Piedmont Truck Center AMOUNT: \$1,245,886.92

JUSTIFICATION:

Using the bid allows the City of High Point to take advantage of the volume discount offered through the NC Sheriff's Association.

ACCOUNTING UNIT	ACCOUNT	ACTIVITY	CATEGORY	BUDGETED AMOUNT
501271	532401			\$1,245,886.92
TOTAL BUDGETED AMOUNT				\$1,245,886.92

DEPARTMENT HEAD: KEVIN ROGERS Digitally signed by KEVIN ROGERS Date: 2025.06.18 12:27:48 -04'00' DATE: 06/18/2025

The Purchasing Division concurs with recommendation submitted by the Fleet Services and recommends award to the lowest responsible, responsive bidder Piedmont Truck Center in the amount of \$1,245,886.62.

PURCHASING MANAGER: Candy E Harmon Digitally signed by Candy E Harmon Date: 2025.06.18 17:04:08 -04'00' DATE: 6/18/2025

Approved for Submission to
Council

FINANCIAL SERVICES DIRECTOR: Bobby Fitzjohn Digitally signed by Bobby Fitzjohn Date: 2025.07.03 10:26:19 -04'00' DATE: 7/3/25

CITY MANAGER: DATE:
(For City Council Approval Only)

CITY OF HIGH POINT

AGENDA ITEM



TITLE: Consideration of a Contract with Housing Consultants Group

FROM:
Thanena Wilson
Community Development & Housing Director

MEETING DATE:
July 17, 2025

PUBLIC HEARING:
No

ADVERTISED DATE/BY:
N/A

ATTACHMENTS:
1. Proposal

PURPOSE: The Community Development & Housing Department solicited proposals for administration of the Affordable Housing Program that includes:

1. Pre-Purchase and Post-Purchase Housing Counseling
2. Homebuyer Education, Financial Literacy Classes, and Lender Trainings
3. Marketing, Promotion and Outreach for the City's Homebuyer Program
4. Homebuyer Loan Underwriting
5. Homeowner Repair Eligibility Intake

Based on evaluation of the proposals submitted, staff recommends awarding the contract in the amount of \$99,700 to Housing Consultants Group.

BACKGROUND: As the demand for housing services related to homelessness, rent and utility assistance, eviction prevention, and resource navigation, administration of the Affordable Housing Program will be outsourced to expand staff capacity.

BUDGET IMPACT: Funds are available in the FY 2025-2026 Budget.

RECOMMENDED ACTION REQUESTED: City Council is requested to consider a contract with Housing Consultants Group in the amount of \$99,700 for the administration of the Affordable Housing Program and authorize the appropriate City Official(s) to execute all necessary documents.



REQUEST FOR PROPOSAL

Affordable Housing Programs Administration March 26, 2025

Due Date: Thursday, April 24, 2025
and time: 2:00 PM

RFP Number: 2018-042425

Mailing Address: P O Box 230
High Point NC 27261

Delivery Address: 816 East Green Drive
Purchasing Division
High Point, NC 27260

Purchasing Contact: Candy Harmon
E-mail: candy.harmon@highpointnc.gov
Phone: 336-883-3222
Fax: 336-883-3248

IF YOU NEED ANY REASONABLE ACCOMMODATION FOR ANY TYPE OF DISABILITY IN ORDER TO PARTICIPATE IN THE PROCUREMENT, PLEASE CONTACT PURCHASING AS SOON AS POSSIBLE.

VENDOR NAME: Housing Consultants Group

(Please include this cover page in your Proposal)



1031 Summit Avenue, Suite 2E-2, Greensboro NC 27405
(Office) 336-553-0946 (Fax) 336-553-0948

April 23, 2025

To: Candy Harmon
Purchasing Manager, City of High Point

From: Housing Consultants Group
1031 Summit Avenue, Suite 2E-2
Greensboro, NC 27405

Re: Proposal for Affordable Housing programs Administration

The Housing Consultants Group (HCG) is pleased to present this proposal to the City of High Point to provide Affordable Housing Programs Administration. Our previous experience in High Point and Greensboro, NC allows us the ability to run these Programs seamlessly.

The mission of HCG is to support individuals and families to enhance financial wellness through education, counseling, financial relationships, and sustainable homeownership. Our vision is sustainable generational wealth through financial wellness and homeownership.

We have a deep understanding of skills needed for these Programs to run effectively and efficiently. We have the knowledge and skills to effectively fulfill the roles and responsibilities of these Programs.

Please find below a proposed scope of services and fee for services. These services and associated costs are based on our understanding of the City of High Point's needs; however, we are always happy to negotiate and make adjustments at your request. HCG is ready to adhere to the services and fees outlined in this proposal. and this signed cover letter binds HCG.

I will serve as the primary contact for staff for the initial phase of the contract. Additional Team members will be included after that.

A handwritten signature in blue ink that reads 'Sofia S. Crisp'.

Sofia S. Crisp
Founder and Executive Director



1031 Summit Avenue, Suite 2E-2, Greensboro NC 27405
(Office) 336-553-0946 (Fax) 336-553-0948

Table of Contents	Pages
Firm Background	1
Previous Experience	2-11
Proposed Personnel	11-12
Project Costs	13-14
References	13-14
Representative	14

FIRM BACKGROUND (ORGANIZATION INFORMATION)

HCG aims to create sustainable generational wealth through financial wellness and homeownership. We support individuals and families by offering education, counseling, financial relationships, and sustainable homeownership. As a housing counseling agency, we believe homeownership brings stability, and financial literacy is key to sustaining households. Our services ensure affordable housing and financial wellness for low to moderate income homebuyers.

1. **North Carolina Non-Profit Corporation.** See Attachment G (Letter documenting 501(c)(3) status)
2. **HUD-Approved Housing Counseling Agency** See Attachment H (A copy of the approval letter/form, and the expiration date, including areas of specialties)

HUD-Certified staff that will be working with the Programs are Sofia S. Crisp, Neris Pena, Tamika Bowers and Eunika Smalls

PREVIOUS EXPERIENCE

Describe the experience of your organization in delivering housing counseling services. Provide details on the training and experience of key personnel involved in these services.

Education is a significant aspect of HCG's work. These services have been provided in Guilford County through awarded contracts for the following periods:

- Since 2008, for the City of High Point for Individual Development Account (IDA), and since 2015, for Housing Counseling & Homebuyer Education.
- From 2015 to 2017, as part of Housing Counseling & Homebuyer Education for the City of Greensboro.
- From late 2018 to present, for the City of High Point's down payment assistance program, including a Homebuyer Education component.
- In 2023, the Public Service Heroes Program was added to Housing Connect GSO.

These courses have also been offered in collaboration with or funded by the following entities:

- NC Housing Finance Agency – since 2008
- Lincoln Financial – 2016– Present
- Wells Fargo Financial – 2008 – Present
- United Way – 2021- Present
- Salvation Army – 2018-present
- Greensboro Urban Ministry – 2023-present
- Truist (and formerly BB&T) – 2021-Present

Effective Housing Counseling begins with equipping our Housing Counselors with the knowledge and tools needed to effectively assist our clients. This enables us to provide superior client service, which remains a priority for the organization. Reviewing our credentials, qualifications, and certifications will allow the City of High Point to quickly

recognize our extensive expertise in this area.

Our results demonstrate our success. HCG consistently meets or exceeds our annual counseling goals. Education helps us reach more people, but counseling builds deeper connections and allows us to assess, understand, and plan effectively for families in need.

HCG offers Homebuyer Education, Pre-Foreclosure Counseling, and Financial Literacy services. Our organization has demonstrated competency, skills, operational knowledge, performance standards, and adheres to a Code of Ethics recognized by the North Carolina Housing Finance Agency as an award-winning non-profit.

In addition to our accolades, we hold the following certifications:

- NCHEC Certification in Foreclosure Intervention and Default Counseling (2010, 2013)
- NCHEC Certification in Pre-Purchase Homeownership Education (2010, 2013)
- NCHEC Certification in Post Purchase Education (2011)
- NCHEC Certification in Homeownership Counseling for Program Managers and Executive Directors
- NeighborWorks Certificate of Completion in Effective Group and Telephone Foreclosure Counseling Strategies (2009)
- NeighborWorks Certificate of Completion in Developing and Implementing an Effective Foreclosure Program (2009)
- NeighborWorks Certificate of Completion in Understanding Credit Scoring (2009)
- NeighborWorks Certificate of Completion in Enhancing the Effectiveness of a Foreclosure Intervention Counseling Program (2013)
- NeighborWorks Certificate of Completion in Delivering Effective Financial Education for Today's Consumer
- HOME Specialist - Federal Regulations
- NDI Master Trainer – Upward to Financial Stability (2015)
- Community Engagement-Certified Resident Leadership Trainer (2018)
- NCRC National Training Academy – Effective Rental Housing Counseling (2020)

Provide details of any down payment and/or closing cost assistance programs to which your organization utilizes or has access.

HCG has been operating since 2004 with a focus on encouraging home ownership, particularly supporting first-time homebuyers. We are familiar with the DPA programs available.

NCHFA - We have experience working with the DPA program available through the North Carolina Housing Finance Agency (NCHFA), including the *NC 1st Home Advantage Down Payment* program and the *Community Partners Loan Pool*. Most of the successful DPA programs we work with operate at the local and state level.

City of High Point – The city offers a DPA program known as the *Core City Homebuyer Incentive*, which has been effective. Since 2016, HCG has facilitated over 200 home sales using our educational courses combined with the city's homebuyer incentives.

City of Greensboro Housing Connect GSO Housing Connect GSO Housing Connect GSO.

HCG has assisted over 1300 families in obtaining DPA since 2019.

Pinnacle Bank - In 2021, HCG was selected as one of four organizations in North Carolina by Pinnacle Bank to provide DPA to buyers at or below 80% area median income. HCG is the most successful partner in NC. Additionally, we administered the DPA program for Pinnacle in the Atlanta, GA area temporarily until a local partner was found and acted as a technical consultant for the new permanent partner.

Fulton County - HCG is collaborating with Fulton County, GA Health and Human Services, and Community Development Department to revamp and relaunch their Downpayment Assistance Program, scheduled for launch on May 1, 2025. Lender and realtor training is provided monthly to ensure knowledge of guidelines and assistance with using the Neighborly platform.

Describe your experience in outreach, education, one-on-one counseling, credit improvement, and debt reduction strategies. Include proposed short- and long-term outcome planning milestones, support, monitoring, and tracking progress. Provide samples of marketing and outreach efforts.

Our outreach experience encompasses educating both potential buyers and industry professionals such as Realtors and Lenders. These groups have access to significant networks of potential homebuyers. HCG's Executive Director has maintained relationships with this community for over 30 years and is recognized locally, statewide, and nationally, particularly in fair housing and advocacy. She was recently appointed to the National Association of Realtors Public Policy Coordinating Committee.

Our educational approach consists of three tiers:

- Tailoring teaching methods to meet clients where they are.
- Understanding their issues and environments to inform teaching content and methods.
- Recognizing that behavioral changes occur over time through accountability.

We offer group education, housing counseling, and coaching. Providing education in a group setting allows economies of scale, reaching numerous clients simultaneously. Our programs follow specific curricula, yet we also adapt our approach to meet individual needs and set realistic goals.

Counseling and coaching differ from education in focus. Counseling involves one-on-one problem-solving advice, typically before a decision is made. Coaching empowers individuals to change behaviors and make informed decisions outside of crisis situations. This philosophy defines HCG's culture and expertise.

Our offerings target populations at 120% or below area median income, addressing varied needs:

- **Five-Session Financial Boot Camp:** Covers basic banking, credit usage, borrowing responsibly, creating spending plans, distinguishing needs from wants, mortgage loans, budgeting strategies, and homeownership responsibilities.
- **Homebuyer Education:** Provides detailed home buying process information, including down payment assistance, rising home prices, and successful purchase offers. Addresses homeownership preparation, sustainability, default signs, and basic maintenance.
- **Individual Development Accounts (IDA):** A year-long course requiring savings commitments, attendance, and monthly coaching. It targets changing poor financial habits through documented inputs and interactive tools. While IDA is not a part of this proposal, we will continue to provide utilizing other funding sources.

HCG collaborates with its Board of Directors, staff, and educates itself on the latest trends in financial capability and housing counseling. Our plans include:

- Achieving 90% satisfaction rates for class offerings and housing counselors.
- Maximizing the utility of housing counselors to maintain low administrative costs.
- Expanding curriculum to address high-priced market shopping.
- Maintaining certifications for housing counselors and facilitators.
- Aligning course offerings with participant needs and economic conditions.
- Using technology to reduce administrative costs.
- Encouraging assessments to influence behavior and habit changes.
- Empowering participants through financial capability and stewardship.
- Supporting stable households to foster better-educated children.

Monitoring and tracking progress involve using Success Measures Data System, a NeighborWorks tool. Attachment I (Success Measures Data System)

For marketing and outreach, HCG has participated in various buyer events with Housing Foundation of America, Greensboro Municipal Credit Union, and the Women's Resource Center. Outreach efforts have included realty firms like KMD Realty, Berkshire Hathaway-Yost and Little Realty, and Kristle Williams Realty. See Attachment J (Marketing and Outreach flyers.)

Our accumulated experience has strengthened outreach efforts in Greensboro. Partnering with NC A&T State University Real Estate Foundation, we plan to develop a Real Estate Development Club to train certified homebuyer counselors, increasing organizational capacity. Collaborations with Moses Cone Foundation will provide educational seminars in low to moderate-income communities. Recent outreach includes High Point NAACP's Housing Fair and the Black Empowerment Blueprint Summit at Guilford College in March 2025, aimed at attracting lenders, realtors, and potential homebuyers.

Describe your organization's experience underwriting homebuyer loans using HUD guidelines.

HCG has provided mortgage and underwriting services for the down payment/closing assistance program through Housing Connect GSO since 2018, with documented achievements throughout this proposal. The processes are as follows:

1. Applications are received through the Neighborly Portal and marked as "applications in process" while documents are reviewed for completeness, often requiring communication with the Lender via "tasks".
2. Once tasks are completed by the Lender and all documents are received, the file is marked as "submitted".
3. The application is then forwarded to HCG's Housing Counselor for processing. Processing includes review of all documents, income verification utilizing HUD's income eligibility method (Part 5 as per 24 CFR 5.609), review of Offer to Purchase, Inspection, and review of the Due Diligence Request Form.
4. HCG's Lead Housing Counselor previously worked as a processor for Bank of America, and its Executive

Director is a Realtor with 31 years of Real Estate experience, specializing in reviewing Home Inspections from a Buyer's Agent perspective, identifying potential issues within homes that could be problematic for new homeowners if not addressed by the Seller prior to Closing.

5. Once an application is approved, notification is sent to the Lender, and a check request is sent to Neighborhood Development. When the check is ready, Neighborhood Development informs HCG. HCG then apprises the Lender and Realtor once funds are available for pick-up by either approved party.

Our success with down payment assistance (DPA) and loan underwriting was key to our selection as one of four partners for Pinnacle Financial Partners' DPA program in 2020, and recognition as the lead agency in NC based on performance. Collaborating with the City of Greensboro's complete review of underwriting guidelines, HCG contributed to changes that helped increase the number of approved DPA loans without compromising loan quality.

Our experience with down payment assistance includes private, State, local bond, and federal funding (HOME). We have used the Neighborly platform since 2021. Loan intake and processing starts with Lenders uploading applicants' information into Neighborly. HCG's Team reviews applications for completeness and compliance with guidelines. Each file is underwritten by a Housing Counselor based on the funding source. Eligibility is confirmed and checked for program compliance. Once an application is approved, loan documents are created and reviewed by HCG and the Paralegal at the Closing Attorney's office. Upon completion, a Housing Counseling One-on-One Session is scheduled with the Buyer. During this session, the following items are reviewed:

1. All closing documents and pertinent numbers including funds to close
2. Understanding the first year of homeownership and expectations
3. Emergency Planning
4. Post-Purchase Educational requirement of HCG

After Closing, recorded documents are forwarded to the city. The entire process is relatively seamless. It is worth noting that HCG has never missed a Closing date, even during the chaotic and fast-moving real estate environment from 2019 to 2022.

Describe your organization's experience qualifying clients for income eligibility using HUD guidelines for home repair and down payment assistance.

We utilize the following Sample format for calculation of income:

SAMPLE FORMAT FOR CALCULATING PART 5 ANNUAL INCOME

1. Name		2. Identification	
ASSETS			
Family Member	Asset Description	Current Cash Value of Assets	Actual Income from Assets
3. Net Cash Value of Assets.....		3.	
4. Total Actual Income from Assets.....		4.	
5. If line 3 is greater than \$5,000, multiply line by ____ (Passbook Rate) and enter results here; otherwise, leave blank		5.	
ANTICIPATED ANNUAL INCOME			
Family Members	Wages/Salaries	Benefits/Pensions	Public Assistance
6. Totals	a.	b.	c.
Enter total of items from 6a. through 6e. This is Annual Income.			7.

The HOME investment partnerships (HOME) Program funds affordable housing, targeting low- and very low-income households. Participating Jurisdictions (PJ's) must use one of three annual income definitions for eligibility, and HCG follows the chosen method using the **HUD Guide for Determining Income** and **CPD Income Eligibility Calculator** at <https://www.hudexchange.info/incomecalculator/>. Households must be at 80% or less of HUD Income Limits. Income certification must include source documents such as:

- Pay Stubs
- Income Tax Returns
- W-2
- Social Security Award Letters
- Retirement Benefits
- Verification of Income Reports
- Bank Statements
- Child Support Income
- Housing Choice Voucher
- Alimony
- P & L Reports if Self-employed
- Any additional income source documents

Applicants sign a HUD Low-Income Affidavit for the Homebuyer File. HCG has experience with home repair programs dating back to its contractual relationship with the City of High Point in in 2004 and 2005. FPS was the platform used for application submissions., and will assist homeowners with uploading information in Neighborly, assessing completeness, and notifying the Department. We follow the same HUD criteria used for HOME funding.

Proposers should include your experience with Realizing the American Dream or any unique programs or program

designs that extend beyond the traditional housing counseling program designs and their impact on aiding families to improve their financial capability and become or move closer to homeownership.

HCG has some foundational philosophies that yield unique programs and design elements for the targeted population that it serves:

We don't say "NO", We say, "Not Yet" – As Financial Literacy specialists, HCG has designed programs that can help clients wherever they may find themselves. It deploys a *four-tier approach* that offers classes to clients dependent on their credit score and financial profile. This could include a Financial Boot Camp, an Individual Development Account course (to our knowledge HCG is the sole provider of this savings account in Guilford County), or a Homebuyer Education course. These assortments of classes mean that HCG does not discourage or turn people away. Instead, HCG meets them where they are and begins the process of creating or fostering better spending habits, establishing credit, or fully understanding the home buying process.

HCG responds to the specific needs of its clients – HCG operates to be nimble and responsive to the needs of the community. It uses NCHEC's "Realizing the American Dream" and the Consumer Financial Protection Bureau's resources to implement its offerings. Beyond its standard line-up of courses, HCG has worked with other organizations to craft courses focused on helping specific audiences. Examples include:

- **Emergency Rental Assistance Program & COVID-19** – Administered distribution of funds for those suffering job losses to help maintain shelter over their heads. Updated curriculums in the foundational Bootcamp offering to highlight financial emergencies and how to deal with them.
- **Women 2 Women** – A collaborative curriculum combining the International Voice of the Woman with HCG's Financial Capability training to support empowerment. Studies show that 97% of respondents reported that comprehensive education along with continued support from Habitat improved their quality of life, their children performed better in school, and they had better job opportunities.
- **Severely Delinquent Homeowners** – A Habitat for Humanity course providing a specialized five-week curriculum for Loss Mitigation and counseling, culminating with recommendations and a game plan to keep homeowners in their homes.
- **Financial Fitness & Diverse Communities** – A Habitat for Humanity course designed in collaboration with Habitat to address concerns about cultural diversity between native Americans and foreigners. Legal foreigners were credit-qualified, while Americans of the same income had more issues overcoming poor spending behaviors to become gainful homeowners and credit-qualified for homeownership.
- **Partnership Village** – Using Financial Wellness courses specifically catered to people in transitional housing, formerly homeless, to take steps to become financially capable, credit-worthy, and eventual homeowners.
- **3by30** – HCG was asked by the National Association of Realtors to be part of the Black Homeownership Collaborative, 3by30. The plan identifies seven steps to increase Black homeownership by 3 million new homeowners by 2030, increasing the Black homeownership rate by more than 10 percent.
- **Real Estate Development** – HCG collaborates with two Contractors to address the lack of affordable housing inventory in Greensboro. They worked with Community Housing Solutions as their Listing Agent in High Point for Cedrow neighborhood development and are working with them in the Southside neighborhood. HCG began new construction efforts in High Point in 2022 and plans to begin a second home in 2025.

HCG is involved in initiatives like Research, Policy and Impact Center of the National Institute of Minority Economic Development's multiyear effort to increase homeownership and business opportunities for underrepresented housing developers and close the Black-white homeownership gap in Guilford County.

Describe your organization's outreach and marketing strategies to reach clients and explain how client referral is received. Please include a plan to collaborate with the City in marketing its Affordable Housing Programs.

To achieve our objective of providing 200 homebuyers with individual counseling sessions and attendees for Financial Capability Classes, we will employ several effective strategies:

We will highlight and promote the City of High Point monthly within our regular Homebuyer Education class offerings and Newsletter. During these sessions, we will use the DPA FAQ sheet as key talking points.

Monthly training sessions will be provided for Lenders and Realtors to increase exposure.

Our marketing and outreach efforts will utilize various proven methods:

- Flyers posted on HCG's website.
- Visual brochures showcase families benefiting from the program and provide details about the program.
- Regular use of established social media platforms to publicize DPA programs.
- Sharing stories and videos of families for social media posting.

We will partner with the City's Communication Department to maximize market exposure and regularly share participant successes through press releases. Our plan includes buyer-facing events in January, April (Fair Housing Month), June (Homeownership Month), and September.

In summary, with established training programs and HCG's brand and name recognition throughout the Greater Greensboro community, we are confident in our ability to achieve the set goals.

Describe in detail opportunities for collaboration with other organizations to expand and enhance your organization's program.

In the nonprofit sector, terms like sustainability, collaboration, and collective impact have become increasingly common in recent years. Below are details about our other collaborative partners along with descriptions of our various collaborations.

Describe opportunities for collaboration to expand your organization's program.

In the nonprofit sector, sustainability, collaboration, and collective impact are key concepts. Below are some of our collaborative partners with descriptions of our collaborations.



Beyond the collaborators mentioned, HCG engages with lenders and Realtors in various ways:

- Leveraging our role as a recognized housing advocate to participate in meetings and events on relevant topics.
- Providing updated lender training to strengthen relations and share information about the City of High Point and affordable housing.
- Including strategic lender participation on our Board for the past decade.

Our strategy is to use our network and reputation within the Realtor community to increase visibility at educational events and meetings. We recently upgraded lender training to promote the City of High Point's value. Our Board members work to expand ties to lenders. Additionally, we utilize social media and target press/media through our Executive Director's role in the Realtor community.

Describe your organization's experience, plan, and approach to engaging with lenders and Realtors in the High Point community.

In addition to collaborating with key partners as outlined, HCG engages in various collaborative efforts within the lender and Realtor domains. Examples include:

- Utilizing its position as a recognized housing advocate to participate in additional meetings and events on relevant topics.
- Updating lender training programs to provide both existing and new lender relationships with the latest information concerning the City of High Point and the affordable housing sector.
- Ensuring strategic representation from lenders on the board over the past decade.

The plan and approach encompass leveraging HCG's network within the Realtor community and maintaining visibility at numerous educational events and meetings. The recently enhanced lender training program offers an opportunity to communicate the values of the City of High Point. Furthermore, the Board includes strategic lender participation to solidify ties with lenders. These initiatives are supported by social media strategies and targeted press/media efforts, along with the Executive Director's active involvement in the Realtor community.

PROPOSED PERSONNEL

Our results demonstrate our success. HCG consistently meets or exceeds our annual counseling goals. Education helps us reach more people, but counseling builds deeper connections and allows us to assess, understand, and plan effectively for families in need.

Note our credentials below:

STAFF/VOLUNTEER ROLE	RESPONSIBILITIES	CREDENTIALS/QUALIFICATIONS
Sofia S. Crisp, HUD Certified Housing Counselor, Executive Director	Primary Program Implementation/Evaluation, oversight course facilitation program, Resource Development for Homebuyer and financial	Bachelor's degree, Certified Housing Counselor, Certification in Pre-Purchase Education by NeighborWorks Center for Homeownership Education and Counseling (NCHCEC), "Realizing the American Dream" NCHCEC Certification in Post-Purchase Education, "Keeping the American Dream",

	education programs	Certified Housing Counselor.
Tamika Bowers, HUD Certified Housing Counselor, Community Impact Director	Secondary Program Implementation/Evaluation, oversight course facilitation program, Staff Mentor/Coach; Resource Development for Homebuyer and financial education programs. One on One's with clients.	Bachelor's Degree, Accredited Financial Counselor by Association of Financial Counseling and Planning Education, Certified Housing Counselor
Neris Pena, HUD Certified Housing Counselor, Programs & Services Consultant	Course Facilitation, Success Coaching, DPA Application Review and Underwriting, One on One's with clients	Certified Housing Counselor, NCHEC Certification in Pre-Purchase Education by the Association of Housing Counselors, NCHEC Loss Mitigation/ Default Housing Counseling
Eunika Smalls, Certified Housing Counselor	Program Review and Oversight	Certified Public Accountant, Housing Credit Compliance Professional, Senior Professional Human Resources, Certified Global Management Accountant

PROJECT COSTS

Detailed Annual Program Budget

Proposer Organization Name	Housing Consultants Group
----------------------------	---------------------------

Eligible Budget Line Item	Amount Requested
Pre-Purchase Counseling Service, \$125/household up to 100 households	\$ 12,500.00
Homebuyer Education, \$1,800/month	\$ 21,600.00
Boot Camps, \$800/month	\$ 9,600.00
DPA Underwriting, and Closing doc prep \$500/loan, up to 20 loans/year	\$ 10,000.00
Homeowner Repair \$500/application up to 40 applications/year	\$ 20,000.00
Marketing, Promotion & Outreach, \$500/month	\$ 6,000.00
Post Purchase Classes, \$250/class, 8 classes/year	\$ 2,000.00
Agency Activity Reporting and administration \$1000/month	\$ 12,000.00
Lender and Realtor Orientation/Training, \$500/month	\$ 6,000.00
Total Program Request	\$ 99,700.00

REFERENCES

Mayor Nancy Vaughan, City of Greensboro-Provided Disaster Relief after the tornado in 2018, and Downpayment Assistance, assisting over 1300 families, and Emergency Rental Assistance during COVID-19

Gene Brown, Community Housing Solutions-Collaborated on implementing Operation Inasmuch, a Day of Service Event for over 10 years and serves as CHS's Realtor for new home sales in underserved neighborhoods in High Point and Greensboro.

Jackie Lucas, Salvation Army Center of Hope-Collaborated in establishing the family Success Center 2 , providing financial wellness education and its Pathways to Homeownership Program

(See Attachment B)

REPRESENTATIVE

See Attachment K (Letter of Certification)

CONSULTANT INFORMATION

FIRM NAME: Housing Consultants Group

ADDRESS: 1031 Summit Avenue, Suite 2E-2

CITY, STATE, ZIP: Greensboro, NC 27405

TELEPHONE NUMBER: 336 553 0946 FAX: 336 553 0848

FEDERAL EMPLOYER IDENTIFICATION NUMBER: 20-1845302

E-MAIL: sofia.crisp@housingconsultantsgroup.org

REFERENCES

Customer Name: Mayor Nancy Vaughan

Customer Contact: Nancy.Vaughan@greensboro-nc.gov

Customer Phone Number: 336-373-2397 (office) or 336-339-3607 (cell)

Customer Address: 300 W. Washington Street, Greensboro, NC 27401

Type of Project: Housing Connect GSO

Length of Project: 2018-present

Customer Name: Gene Brown, Executive Director Community Housing Solutions

Customer Contact: gbrown@chshousing.org

Customer Phone Number: 336 676 6987 or 336 254 5709

Customer Address: 1031 Summit Ave., Suite 1E-2, Greensboro NC 27405

Type of Project: OIAM, current Listing Agent for properties (Cedrow and Southside)

Length of Project: 2014-present

Customer Name: Jackie Lucas, Former Executive Director, Salvation Army, Center of Hope

Customer Contact: sgunte@nchousing.org

Customer Phone Number: blessed2682@hotmail.com

Customer Address: 3608 University Dr, Suite 201, Durham, NC 27707

Type of Project: Family Success Center 2, partner, Pathways to Success, partner

Length of Project: 2021-2024

FINANCIAL STABILITY

Each Vendor shall certify it is financially stable by completing the ATTACHMENT D: CERTIFICATION OF FINANCIAL CONDITION (below). The City of High Point is requiring this certification to minimize potential issues from Contracting with a Vendor that is financially unstable. From the date of the Certification to the expiration of the Contract, the Vendor shall notify the City of High Point within thirty (30) days of any occurrence or condition that materially alters the truth of any statement made in this Certification.

CERTIFICATION OF FINANCIAL CONDITION

Name of Vendor: Housing Consultants Group

The undersigned hereby certifies that: [check all applicable boxes]

☒ The Vendor is in sound financial condition and received an unqualified audit opinion for the latest audit of its financial statements.

Date of latest audit: July 2024

☒ The Vendor has no outstanding liabilities to the Internal Revenue Service or other government entities.

☒ The Vendor is not the subject of any current litigation or findings of noncompliance under federal or state law.

☒ The Vendor has not been the subject of any past litigation or findings of any past litigation or findings of noncompliance under federal or state law that may impact in any way its ability to fulfill the requirements of this Contract.

☒ He or she is authorized to make the foregoing statements on behalf of the Vendor.

If any one or more of the foregoing boxes is NOT checked, explain the reason in the space below or add additional pages.

Sofia S. Crisp

Authorized Signature

Sofia S. Crisp, Executive Director

EXECUTION OF PROPOSAL

By submitting this proposal, the potential Vendor certifies the following:

- This proposal is signed by an authorized representative of the firm.
- It can obtain insurance certificates as required within 10 calendar days after notice of award.
- The cost and availability of all equipment, materials, and supplies associated with performing the services described herein have been determined and included in the proposed quote.
- All labor costs, direct and indirect, have been determined and included in the proposed quote.
- The potential contractor has read and understands the conditions set forth in this RFP and agrees to them with no exceptions. If exceptions exist, they must be listed on a separate sheet.

Therefore, in compliance with this Request for Proposals and subject to all conditions herein, the undersigned offers and agrees, if this Proposal is accepted:

PROPOSAL (QUOTE): \$99,700

Ninety Nine Thousand,, Seven Hundred Dollars

(Written Proposal Amount)

(Signature) Sofia S Crisp TITLE: Executive Director

BY: Sofia S. Crisp
(typed or printed name)

DATE: April 23, 2025

AFFIDAVIT-MINORITY PARTICIPATION

The City of High Point is committed to providing equal opportunities for participation in all aspects of the City of High Point contracting and purchasing programs including, but not limited to, participating in procurement contracts for, materials, services, construction and repair work activities, and lease agreements in the City of High Point. The Purchasing Division actively seeks to identify qualified minority, handicapped, disadvantaged, and women-owned business enterprises so as to widen opportunities for participation as providers of goods and services, increase competition and ensure the proper and diligent use of public funds.

(NOTE: THIS FORM IS TO BE SUBMITTED WITH THE BID PROPOSAL)

Portion of the Work to be performed by Minority Firms

Housing Consultants Group do hereby certify that on the (Name of Bidder)

Affordable Housing Programs Administration

(Project Name)

Project ID# _____ Amount of Bid \$ 99,700

I will expend a minimum of 5.2 % of the total dollar amount of the contract with minority business enterprises. Minority businesses will be employed as construction subcontractors, vendors, suppliers or providers of professional services. Such work will be subcontracted to the firms listed below.

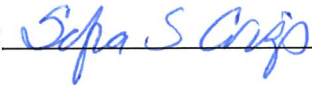
Attach additional sheets if required

Name and Phone Number	Minority Category	HUB Certified (Y/N)	Work Description	Dollar Value
Quailistics, Jennifer Gaddy, 336 870 2978	AA, F	N	IT Services, Website assistance with marketing and Program updates	\$5228

*Minority categories: Black, African American (**B**), Hispanic (**H**), Asian American (**A**) American Indian (**I**), Female(**F**) Socially and Economically Disadvantaged (**D**) Employee Stock Ownership Plan (ESOP)

The undersigned hereby certifies that he or she has read the terms of this commitment and is authorized to bind the bidder to the commitment herein set forth.

Date: April 23, 2025 Name of Authorized Officer: Sofia S. Crisp

Signature:  Title: Executive Director

STATE OF NORTH CAROLINA
CITY OF HIGH POINT
E-VERIFY AFFIDAVIT

ATTACHMENT F

I, Sofia S. Crisp (the individual attesting below), being duly authorized by and on behalf of Housing Consultants Group (the entity bidding on project hereinafter "Employer") after first being duly sworn hereby swears or affirms as follows:

1. Employer understands that E-Verify is the federal E-Verify program operated by the United States Department of Homeland Security and other federal agencies, or any successor or equivalent program used to verify the work authorization of newly hired employees pursuant to federal law in accordance with NCGS §64-25(5).
2. Employer understands that Employers Must Use E-Verify. Each employer, after hiring an employee to work in the United States, shall verify the work authorization of the employee through E-Verify in accordance with NCGS §64-26(a).
3. Employer is a person, business entity, or other organization that transacts business in this State and that employs 25 or more employees in this State. (mark Yes or No)
 - a. YES _____, or
 - b. NO X
4. Employer's subcontractors comply with E-Verify, and if Employer is the winning bidder on this project Employer will ensure compliance with E-Verify by any subcontractors subsequently hired by Employer.

This 21 day of April, 2025

Sofia S. Crisp
Signature of Affiant
Print or Type Name: Sofia S. Crisp

State of North Carolina County of Guilford

Signed and sworn to (or affirmed) before me, this the 21st

day of April, 2025

My Commission Expires:

January 24th 2029

Notary Public

(Affix Official/Notarial Seal)

MATTHEW W TURNER
Notary Public
Guilford Co., North Carolina
My Commission Expires Jan. 24, 2029

INTERNAL REVENUE SERVICE
P. O. BOX 2508
CINCINNATI, OH 45201

DEPARTMENT OF THE TREASURY

Date: **AUG 29 2005**

GUILFORD COUNTY HOME OWNERSHIP
CENTER
408 BLANDWOOD AVE
GREENSBORO, NC 27401

Employer Identification Number:
20-1845302
DIN:
17053039075035
Contact Person:
STEPHEN D SHOK ID# 31125
Contact Telephone Number:
(877) 829-5500
Accounting Period Ending:
December 31
Public Charity Status:
170(b)(1)(A)(vi)
Form 990 Required:
Yes
Effective Date of Exemption:
October 8, 2004
Contribution Deductibility:
Yes
Advance Ruling Ending Date:
December 31, 2008

Dear Applicant:

We are pleased to inform you that upon review of your application for tax exempt status we have determined that you are exempt from Federal income tax under section 501(c)(3) of the Internal Revenue Code. Contributions to you are deductible under section 170 of the Code. You are also qualified to receive tax deductible bequests, devises, transfers or gifts under section 2055, 2106 or 2522 of the Code. Because this letter could help resolve any questions regarding your exempt status, you should keep it in your permanent records.

Organizations exempt under section 501(c)(3) of the Code are further classified as either public charities or private foundations. During your advance ruling period, you will be treated as a public charity. Your advance ruling period begins with the effective date of your exemption and ends with advance ruling ending date shown in the heading of the letter.

Shortly before the end of your advance ruling period, we will send you Form 8734, Support Schedule for Advance Ruling Period. You will have 90 days after the end of your advance ruling period to return the completed form. We will then notify you, in writing, about your public charity status.

Please see enclosed Information for Exempt Organizations Under Section 501(c)(3) for some helpful information about your responsibilities as an exempt organization.

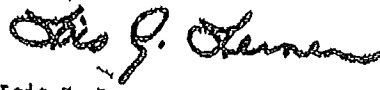
Letter 1045 (DO/CO)

-2-

GUILFORD COUNTY HOME OWNERSHIP

We have sent a copy of this letter to your representative as indicated in your power of attorney.

Sincerely,



Lois G. Lerner
Director, Exempt Organizations
Rulings and Agreements

Enclosures: Information for Organizations Exempt Under Section 501(c)(3)

Letter 1045 (bo/cc)



HUD CERTIFICATE

APPROVED HOUSING COUNSELING AGENCY

The U. S. Department of Housing and Urban Development approves the following entity as a Local Housing Counseling Agency.

HOUSING CONSULTANTS GROUP (84195)
1031 Summit Ave Suite 2E-2
Greensboro, NC 27405-7010

The Department approved this housing counseling agency to provide the following types of housing counseling in accordance with their counseling work plan.

Counseling:

- Financial Management/Budget Counseling
- Mortgage Delinquency and Default Resolution Counseling
- Pre-purchase Counseling
- Rental Housing Counseling

Workshop:

- Fair Housing Pre-Purchase Education Workshops
- Financial, Budgeting, and Credit Workshops
- Non-Delinquency Post Purchase Workshops
- Pre-purchase Homebuyer Education Workshops
- Resolving/Preventing Mortgage Delinquency Workshops

Approval Start Date: **January 17, 2024**

Approval End Date: **January 16, 2027**

Kisha J Wright

Kisha J. Wright
Director, Oversight and Accountability
Office of Housing Counseling

FINANCIAL EDUCATION AND CAPABILITY MEASUREMENT TOOLS - ADULT

The Success Measures Financial Education and Capability Tools document changes in consumers' financial attitudes, behaviors, and resilience resulting from a broad array of financial capability programs. Examples of programs included are financial coaching, financial education, housing, foreclosure mitigation, credit counseling, and asset-building efforts, such as Individual Development Accounts.

*Note: Versions of these tools appropriate for youth follow the adult tools list.
All Financial Education and Capability Tools are available at no cost for downloading:*

<http://www.successmeasures.org/fctools>

Tool Title	Description
Asset Cushion - Access to Resources	Documents access to and use of credit cards, debit cards, and pre-paid cards.
Asset Cushion - Health Care and Will	Documents access to and use of health care, and use of a will to plan for disposition of assets.
Asset Cushion - Insurance and Safeguards	Documents access to and use of insurance.
Asset Cushion - Status	Documents use of credit, cash, and savings vehicles.
Attitudes Toward Credit and Debt - Importance	Documents feelings about taking on debt for personal expenses, having good credit, and paying back loans.
Attitudes Toward Credit and Debt - Information	Documents source of information about credit and debt, knowledge about and satisfaction with personal credit score.
Attitudes Toward Credit and Debt - Self-Assessment	Documents attitudes about credit and debt, avoiding debt, and confidence in paying bills on time.
Attitudes Toward Entrepreneurship	Documents attitudes about entrepreneurship.
Attitudes Toward Financial Situation - Future	Documents attitudes or expectations for changing or improving financial future.
Attitudes Toward Financial Situation - Security	Documents definition of and feelings about financial security.
Attitudes Toward Having Enough	Documents assessment of financial stability and feelings about sharing with others.
Attitudes Toward Homeownership	Documents attitudes about homeownership.
Attitudes Toward Saving - Importance	Documents motivations and goals for saving, including lifecycle events.
Attitudes Toward Saving - Information and Planning	Documents methods for obtaining information about saving and personal plans and timeframe for saving.
Attitudes Toward Saving - Self Assessment	Documents feelings about and ability for saving.
Attitudes Toward Spending - Importance	Documents key monthly expense and personal prioritization of items.
Attitudes Toward Spending - Self-Assessment	Documents respondent's feelings about being a smart spender.
Attitudes Toward Use of Financial Resources - Importance	Documents attitudes about financial investment activities and different forms of payment.
Attitudes Toward Use of Financial Resources - Information	Documents source of information about financial resources and ability to explain financial resources to friends.

NAACP
High Point Branch

NAACP HP Housing Committee **HOMEOWNERSHIP FAIR**

NO COST TO ATTEND

OWN A HOME ~ BUILD GENERATIONAL WEALTH

**THURSDAY
FEBRUARY 27, 2025
6:00 - 8:00 P.M.**

Pinnacle
FINANCIAL PARTNERS

TRUIST 

**CITY OF
high point.**



First Citizens Bank



SIGNATURE
WEALTH STRATEGIES



HOSTED BY:  **eliminating racism
empowering women**
ywca

YWCA-HP
155 W. Westwood Avenue
High Point, NC 27262

WHO SHOULD ATTEND:

- High Point Community At Large
- Those who currently rent and desire home ownership
- Single Mothers and Families

RSVP here: <https://bit.ly/4j9RbQV>



OBJECTIVES



More than an information session



Overcome perceived barriers to homeownership



Tips for navigating the lender's market



Deciphering: What is generational wealth?



Professional Resources: Banks, Financial, Wealth Management, City of High Point, Section 8 Mortgage Program, Community Partners and more on site.

Need a Ride to Attend?

**Contact Commander's Peace Academy
between 4-5:30 p.m. at 336-992-3524**



**Please join us for the NAACP High Point Housing Committee Homeownership Fair.
A Conversation to Engage, Energize, and Mobilize the Community. Free and Open to the Public.**



1031 Summit Avenue, Suite 2E-2, Greensboro NC 27405
(Office) 336-553-0946 (Fax) 336-553-0948

April 22, 2025

To: City of High Point

From: Housing Consultants Group

RE: Certification of Authorized Agent

I, Sofia S. Crisp, Founder and Executive Director of Housing Consultants Group (HCG), am the individual authorized to bind HCG. I am also authorized to sign on HCG's behalf.

Sofia S. Crisp
Sofia S. Crisp

Founder and Executive Director

CITY OF HIGH POINT

AGENDA ITEM



TITLE: Consideration of a Contract with Community Housing Solutions

FROM:

Thanena Wilson
Community Development & Housing Director

MEETING DATE:

July 17, 2025

PUBLIC HEARING:

No

ADVERTISED DATE/BY:

N/A

ATTACHMENTS:

1. Scope of Work
 2. OIAM Flyer Fall 2025
-

PURPOSE: Staff requests approval of the contract with Community Housing Solutions to fund materials and operational expenses associated with the Operation Inasmuch (OIAM) event for fall 2025. The upcoming event will be on Saturday, November 1st, in the Macedonia-Pershing neighborhoods.

The amount allocated for the contract is \$100,000.

BACKGROUND: The fall event will be the 17th OIAM event since May 2016. Volunteers are utilized to complete home repairs, ramps, painting, and needed yardwork. To date, there have been approximately 1,800 volunteers who have donated their time and energy to assist 206 households.

BUDGET IMPACT: Funds are available in the FY 2025-2026 Budget.

RECOMMENDED ACTION REQUESTED: City Council is requested to consider a contract with Community Housing Solutions in the amount of \$100,000 for operational expenses associated with the OIAM event for Fall 2025 and authorize the appropriate City Official(s) to execute all necessary documents.



July 10, 2025

Thanena Wilson
City of High Point
211 S. Hamilton Street, Room 312
High Point, NC 27260

RE: Operation Inasmuch – Fall 2025

Dear Nena:

Community Housing Solutions (CHS) is excited about being a partner in Operation Inasmuch (OIAM) in High Point for the fall of 2025. CHS will provide services directly or through contracted services with Housing Consultant Group (HCG) to support the preparation, implementation, and completion of home repairs to serve low-income homeowners.

OIAM will be held in the Macedonia – Pershing Neighborhoods on Saturday, November 1, 2025. Outlined below are the scope of services we will provide:

- Solicit homeowners and identify home repair needs with the support of the City of High Point in the selected neighborhoods. Outreach will occur through neighborhood meetings, door to door or via mail to eligible homeowners that could benefit from home repairs through OIAM. They will be directed to contact CHS' Program Services Specialist.
- Complete a home repair application with all eligible homeowners obtaining documentation to verify homeownership and income below 80% of AMI for Guilford County.
- Complete a home repair assessment for each homeowner to be part of OIAM and create a scope of work with a cost estimate to review with the City of High Point for approval.
- Review the approved home repair scope of work with the homeowner prior to OIAM to get signature of approval to complete repairs.
- Promote and recruit OIAM to area faith organizations, businesses, and other interested groups who will provide a minimum of 10 volunteers on the day of the event.
- Send out event details and volunteer waiver forms to organizations volunteering. CHS holds General Liability and Accident coverage that includes volunteers who work with our staff.
- Purchase yard signs recognizing the volunteer organization serving through OIAM.
- Coordinate all planning, solicitations and coordination for event volunteers needed for OIAM Kick-off Ceremony in the morning, breakfast, photography, and media relations.
- Prior to the event day, CHS will purchase all home repair materials/supplies, complete any prep work, obtain any building permits required and coordinate any subcontractor work.
- Provide leadership, training, and tools to the volunteers on each job site during the day of OIAM to complete the home repair scopes of work.
- After the event, complete any remaining tasks not completed on the day of OIAM and clean up the job sites.



- Request payment with QuickBooks reports for each home repair project address with detailed invoices within 30 days of services within the scope, timing, and compensation for OIAM.
- Total contract price for all services: \$100,000

Planning for OIAM will begin on July 15, 2025, with the fall event to be held on Saturday, November 1, 2025. All repair work and clean-up for approved repairs will be completed no later than March 31, 2025.

Our staff looks forward to beginning work on identifying and assessing the needs in these neighborhoods and let me know if you have any questions.

Sincerely,

Gene Brown
President & Executive Director



Saturday, Nov. 1, 2025

Operation Inasmuch is an event offering free home repairs, exterior house painting, accessibility modifications and yard cleanup services to eligible homeowners. These services are funded by the City of High Point and provided by Community Housing Solutions in partnership with local volunteer groups.

How do I know if I am eligible?

- You must live in and own your home in the Macedonia-Pershing neighborhoods
- Fall within specific income guidelines
- Have a qualifying home repair need

To learn more or to apply, contact:

Jan Moore, Administrative Assistant
Community Housing Solutions
336.676.6986
jmoore@chshousing.org
or visit www.highpointnc.gov/OperationInAsMuch

Deadline to apply is Sept. 15, 2025.

Applications will be processed on a first-come, first-served basis.



CITY OF HIGH POINT

AGENDA ITEM



TITLE: Consideration of a Reimbursement Agreement with AT&T Enterprises, LLC

FROM:
Robby Stone
Public Services Director

MEETING DATE:
July 17, 2025

PUBLIC HEARING:
No

ADVERTISED DATE/BY:
N/A

ATTACHMENTS:

1. Facility Reimbursement Agreement Letter
2. Reimbursement Agreement

PURPOSE: To reimburse AT&T Enterprises LLC for the relocation of their fiber optic cables currently located along Kersey Valley Road between Kivett Drive and Cashatt Road.

BACKGROUND: Future expansion of the Kersey Valley landfill merges with the inactive landfill located on the east side of Kersey Valley Rd. and the active landfill on the west side of Kersey Valley Rd. The first step towards this future expansion was to relocate the portion of Kersey Valley Road between Kivett Drive and Cashatt Road. This relocation was completed in 2024 along with most of the utilities that run along Kersey Valley Road between Kivett Drive and Cashatt Road. AT&T Enterprises, LLC owns a fiber optic line that will require relocation within this area but was not included in the road relocation project. This agreement is for the approval of the relocation by AT&T of their infrastructure to an existing 100-foot permanent easement south of the existing Kersey Valley Landfill. Upon completion of this fiber optic relocation, the city can initiate construction of the remaining phases of the Kersey Valley Landfill expansion.

BUDGET IMPACT: Funds are available in the FY 2025-2026 Budget.

RECOMMENDED ACTION REQUESTED: City Council is requested to consider a reimbursement agreement with AT&T Enterprises, LLC in the amount of \$373,005.69 for relocation of fiber optic cables and authorize the appropriate City Official(s) to execute all necessary documents.



Trina Ivey – OSP Engineer
3450 Riverwood Parkway SE
Atlanta, GA 30339
ki2863@att.com

May 8, 2025

City of High Point
Public Services Department
211 S. Hamilton Street
High Point, NC 27260
[VIA EMAIL](#)

Re: Facility Reimbursement Agreement for Relocation of AT&T's Fiber Optic Cables and Facilities ICW the proposed City of High Point, NC Project for a Landfill Expansion on Kersey Valley Road in High Point, NC.

To whom it may concern,

Attached is the AT&T Facility Reimbursement Agreement between AT&T Enterprises LLC (AT&T) and City of High Point, NC for the protection of the above-referenced AT&T Lightguide Facilities. The cost for the work is estimated to be Three Hundred Seventy-Three Thousand Five Dollars and 69/100 Cents (\$373,005.69). AT&T cannot begin work until the attached Agreement is executed and returned to AT&T along with a check in the amount of Three Hundred Seventy-Three Thousand Five Dollars and 69/100 Cents (\$373,005.69). For tracking purposes, please consider using UPS or FEDEX and forward the Agreement along with the check, including Fed. Tax ID number, payable to AT&T Enterprises LLC. to:

AT&T Enterprises LLC
Right-of-Way Department
Attn: Tracy Favors
3450 Riverwood Parkway, SE - Room 162
Atlanta, Georgia 30339

AT&T will finalize the Agreement and return an executed original to you for your files.

If additional information is required or we may be of assistance in any way, please contact me or Mr. Levi Kendrick of DH Communications Inc. at (706) 781-8316.

Sincerely,

Katrina "Trina" Ivey
Supervisor – OSP Engineering

Cc: Levi Kendrick and Danny Hemphill – DH Communications, Inc.
Tracy Favors – AT&T Right of Way

VIA EMAIL
REIMBURSEMENT AGREEMENT

This REIMBURSEMENT AGREEMENT made this ____ day of _____, 2025, by and between **AT&T Enterprises, LLC**, on behalf of itself and its affiliated companies, which has a place of business at 3450 Riverwood Parkway SE, Atlanta, GA 30339 (“AT&T”) and **City of High Point (the “City”)**, a municipal corporation located at **211 S. Hamilton Street, High Point, NC 27260**. AT&T and the City are collectively referred to herein as “the Parties.”

WITNESSETH:

WHEREAS, the City owns certain real property located at 3940 Kivett Drive, Jamestown, NC 27282 known as the Kersey Valley Landfill(“Landfill”); and

WHEREAS, the City is engaged in projects to relocate Kersey Valley Road to allow for future Landfill expansion and the addition of a landfill cell on the Landfill (the “Projects”); and

WHEREAS, AT&T is a grantee of a 100 ft. permanent Easement conveyed by the Right-of-Way Access Easement Agreement recorded in Deed Book **5350**, Page **1563**, with the Register of Deeds in **Guilford County, North Carolina** (the “Easement”); and

WHEREAS, the **Easement** and any AT&T buried cable and associated facilities that have been placed within the **Easement** will be adversely impacted by the City’s proposed construction related to the Projects; and

WHEREAS, the City agrees to reimburse AT&T for AT&T’s cost of protecting, relocating, and/or lowering a section of the **AT&T Core Greensboro to Charlotte FTB including NEXGEN Link 37** Cables at Markers **230 to 250** (the “Cable”);

NOW THEREFORE, the Parties agree as follows:

1. AT&T will provide engineering, plant protection, labor, materials, and supervision necessary to protect, shift, and/or lower the Cable, as deemed necessary in AT&T’s sole judgment (the “Work”). The Work is more particularly described in Exhibit A attached hereto. The starting date will be set by the Parties so that the Work can be completed as expeditiously as practicable.
2. The City shall pay AT&T the actual cost of the Work, which is estimated to be **Three Hundred Seventy-Three Thousand Five Dollars and 69/100 Cents (\$373,005.69)** as shown on attached Exhibit B. The City acknowledges that the estimated cost does not include rock removal costs and that if rock removal is required, the actual cost may greatly exceed the estimated cost. Upon completion of the Work, AT&T will send a final invoice to the City for the actual cost of the Work. If the actual cost is greater than the estimated amount, the City will pay to AT&T the difference within thirty

(30) days from the invoice date. If the actual cost is less than the estimated amount, AT&T shall reimburse the City the difference within sixty (60) days from the invoice date. Exhibits A and B are only good for sixty (60) days from the date of receipt of this agreement.

3. The City agrees to exercise all due caution while working near the Cable, in order to prevent damage to the Cable. The City further agrees:

(a) to notify AT&T by telephone at 1-800 252-1133 at least forty-eight (48) hours prior to performing any construction, demolition or repairs at the Cable location;

(b) not to use at the Cable location any tool, equipment, or machinery capable of being operated within ten (10) feet of the Cable;

(c) to perform construction, demolition, repair, modifications, additions and any other activities in compliance with all applicable laws and regulations and in a manner that does not interfere with the operations of AT&T; and

(d) not to work at the Cable location without AT&T's prior authorization and AT&T's On-Site Work Force personnel being present during the work.

(e) to designate and fully authorize an appointed representative to act on behalf of the City with respect to this Agreement. The representative's instructions, requests, and decisions on behalf of the City will be binding to all matters pertaining to this Agreement.

4. Insurance Coverage

(a) At all times during the course of this Agreement, AT&T shall have and maintain in full force and effect, at its sole cost and expense at least the following types and amounts of insurance coverage:

- i. Commercial General Liability with limits no less than \$1,000,000 per occurrence and \$2,000,000 in the aggregate, including bodily injury and property damage and products and completed operations and advertising liability, which policy will include contractual liability coverage ensuring the activities of AT&T under this Agreement;
- ii. Workers Compensation with limits no less than the minimum amount required by applicable law;
- iii. Commercial Automobile Liability with limits no less than \$2,000,000 combined single limit; and
- iv. Errors and Omissions/Professional Liability with limits no less than \$1,000,000 per occurrence and \$2,000,000 in the aggregate.

- (b) All insurance policies required pursuant to this Section 4 (collectively, the “Required Policies”) shall:
- i. Be issued by insurance companies reasonably acceptable to the City;
 - ii. Provide that such insurance companies give the city at least thirty (30) calendar days’ prior written notice of cancellation or non-renewal of policy coverage; provided that, prior to such cancellation, AT&T shall have the new insurance policies in place that meet the requirements of Section 4;
 - iii. waive any rights of subrogation of the insurers against the City;
 - iv. Provide that such insurance be primary insurance and any similar insurance in the name of and or for the benefit of the City shall be excess and non-contributory and
 - v. Include the city as additional insured
- (c) Section 4 shall not be construed in any manner as waiving, restricting, or limiting the liability of either Party for any obligations imposed under this Agreement (including but not limited to, any provisions requiring a party hereto to indemnify, defend and hold the other Party harmless under this Agreement).
- (d) AT&T shall include as Exhibit C to this Agreement copies of the certificate of insurance evidencing the existence of the Required Policies and including the City as an additional insured thereon (the “Certificates of Insurance”).
5. AT&T makes no warranties, express or implied, including any implied warranties as to merchantability or fitness for a particular purpose.
6. Notwithstanding any provision of this Agreement to the contrary, except as provided in Section 4, in no event shall either Party be liable to the other Party for any special, incidental, indirect, punitive, reliance, or consequential damages, whether foreseeable or not, including, but not limited to, loss of profits or revenue, cost of capital, cost of replacement services, or claims of customers or of other third parties, occasioned by any cause whatsoever, including, without limitation, breach of contract, breach of warranty, negligence or strict liability.
7. The City shall keep the Cable and other property of AT&T free from all mechanic’s, artisan’s, materialman’s, architects, or similar services’ liens which arise in any way from or as a result of its activities and cause any such liens which may arise to be discharged or released.

8. Except for payment of the cost of the Work, neither Party shall have any liability for its delays or its failure in performance due to: fire, explosion, pest damage, power failures, strikes or labor disputes, acts of God, the elements, war, civil disturbances, acts of civil or military authorities or the public enemy, inability to secure raw materials, transportation facilities, fuel or energy shortages, or other causes beyond its control, whether or not similar to the foregoing.

- (a) This Agreement may be terminated by either Party upon notice to the other Party in the event of the other Party's material breach of this Agreement; provided that no termination for material breach may be affected unless the breaching Party fails to cure such breach in thirty (30) calendar days following its receipt of notice of such breach from the non-breaching Party.
- (b) Upon any such termination, AT&T shall promptly discontinue all Work affected and deliver or otherwise make available to the City all documents, data, drawings, specifications, reports, estimates, summaries, and such other information and materials as may have been accumulated by AT&T in performing this Agreement, whether completed or in process.

9. This Agreement shall be binding upon and inure to the benefit of the Parties hereto and their respective successors or assigns. City shall not assign, transfer, or dispose of this Agreement or any of its rights or obligations hereunder without prior written consent of AT&T; provided, however, that the City may assign or transfer this Agreement to a controlling or controlled affiliate or to a successor in the event of reorganization, including a merger or sale of substantially all of its assets, without the consent of AT&T. An assignment, transfer or disposition of this Agreement by the City shall not relieve the City of any of its obligations under this Agreement. AT&T shall have the right to assign this Agreement and to assign its rights and delegate its obligations and liabilities under this Agreement, either in whole or in part, to any party. An assignment, transfer or disposition of this Agreement by AT&T shall not relieve AT&T of any of its obligations under this Agreement. Neither this Agreement, nor any term or provision hereof, nor any inclusion by reference shall be construed as being for the benefit of any person or entity not a signatory hereto.

10. Any demand, notice, request, consent, claim, waiver or other communication to be given to a Party in connection with this Agreement shall be given in writing and shall be given by personal delivery; (with written confirmation of receipt), by registered or certified mail, return receipt requested, or by commercial overnight delivery service addressed to the recipient as set forth below or to such other address or individual, as may be designated by notice given by the Party to the other:

AT&T:
AT&T Enterprises LLC
3450 Riverwood Parkway SE
Atlanta, GA 30339
Room 162
Attention: Right of Way Dept.

With a copy to:

AT&T Enterprises LLC
1425 Route 206 3rd Floor
Bedminster, NJ 07921
Attn: Legal Department - Network Services

City:
City of High Point, NC
Attn: Public Services Department
P.O. Box 230
High Point, NC 27261

Any demand, notice, request, consent, waiver or other communication given by personal delivery shall be conclusively deemed to have been given on the day of actual delivery thereof and if given by registered or certified mail, return receipt requested or by commercial overnight delivery service on the third (3rd) day after the date mailed.

11. The failure of either Party hereto to enforce any of the provisions of this Agreement, or the waiver thereof in any instance shall not be construed as a general waiver or relinquishment on its part of any such provision and said provision shall nevertheless be and remain in full force and effect.

12. This Agreement shall be governed by and construed in accordance with the domestic laws of the State of **North Carolina** without reference to its choice of law principles.

13. Each Party represents and warrants that:

- (a) It has full right and authority to enter into, execute, deliver, and perform its obligations under this Agreement;
- (b) It has taken all requisite corporate action to approve the execution, delivery, and performance of this Agreement;
- (c) AT&T and its subcontractors currently comply and will continue to comply with the requirements of Article 2 of Chapter 64 of the North Carolina General

Statutes, and covenants that at all times during the course of this Agreement, it will continue to comply with these requirements;

- (d) AT&T shall perform the Work using personnel of required skill, experience, and qualifications and in a professional and workmanlike manner in accordance with best industry standards for similar services and shall devote adequate resources to meet its obligations under this Agreement;
- (e) The Work will be in conformity in all material respects with all requirements or specifications stated in this Agreement for a period of two (2) years from full completion of the Work;
- (f) AT&T is not currently under sanction, exclusion or investigation (civil or criminal by a federal or state enforcement, regulatory, administrative or licensing agency) or otherwise ineligible for federal or state program participation, or listed on North Carolina or any other state or federal debarment databases (e.g., Office of Inspector General and System for Award Management);
- (g) This Agreement constitutes a legal, valid and binding obligation enforceable against such Party in accordance with its terms, subject to bankruptcy, insolvency, creditors' rights and general equitable principles; and
- (h) AT&T's execution of and performance under this Agreement shall not violate any applicable existing regulations, rules, statutes, or court orders of any local, state or federal government agency, court or body, relating in any way to the provision of the Work, including, without limitation all such laws, regulations, ordinances, and rules prohibiting discrimination on the grounds of race, color, religion, sex, age, disability, national origin or other protected classes in the performance of the Work under this Agreement.

14. This Agreement constitutes the entire and final agreement and understanding between the Parties with respect to the subject matter hereof and supersedes all prior oral and written communications, understandings and agreements relating to the subject matter hereof, which are of no further force or effect. The exhibits referred to herein are an integral part hereof and are hereby made a part of this Agreement. This Agreement may only be modified or supplemented by an instrument in writing executed by a duly authorized representative of each Party. In case of a conflict between the provisions of this Agreement and the provisions of any exhibit or other document referenced by or incorporated into this agreement, the provisions of this agreement shall control and prevail. Any terms and conditions or similar provisions submitted by AT&T on an invoice or other form shall not become a part of this agreement unless agreed upon in a writing executed by a duly authorized representative of the city. Without limiting the generality of the foregoing, the parties acknowledge and agree that exhibit A attached hereto may take the form of AT&T's proposal of the work, in which case any verbiage set forth on exhibit they that conflicts with the provisions of this agreement or its other exhibits, or adds any terms, conditions, qualifications, covenants, or agreements beyond

the matter that this agreement specifically contemplates to be addressed on exhibit A (i.e., a description of the Work, the compensation payable to AT&T for the Work, and the documentation to be provided in connection with the Work, and the schedule for performance of the Work), shall be disregarded and of no force or effect.

15. Each action or claim against any Party arising under or relating to this Agreement shall be made only against such Party as a corporate entity, and any liability relating thereto shall be enforceable only against the corporate assets of such Party. No Party shall seek to pierce the corporate veil or otherwise seek to impose any personal liability relating to, or arising from, this Agreement against any shareholder, employee, officer, or director of the other Party. Each of such persons is an intended beneficiary of the mutual promises set forth in and shall be entitled to enforce the obligations of this Agreement.

16. The relationship between the Parties shall not be that of partners, agents or joint ventures for one another, and nothing contained in this Agreement shall be deemed to constitute a partnership or agency agreement between them for any purposes, including, but not limited to federal income tax purposes. The Parties, in performing any of their obligations hereunder, shall be independent contractors or independent parties and shall discharge their contractual obligations at their own risk.

17. This Agreement and each of the Parties' respective rights and obligations under this Agreement shall be binding upon and shall inure to benefit of the Parties and each of their respective permitted successors and assigns.

18. The captions and headings contained in this Agreement are for convenience and reference only, and do not define, describe, extend, or limit the scope of intent of this Agreement or the scope or intent of any provision contained herein.

19. This Agreement thereof shall be governed, interpreted, construed, and regulated by the laws of the State of North Carolina without giving effect to its principles regarding conflict of laws. Any legal suit, action, or proceeding arising out of or related to this Agreement or the Work provided hereunder shall be instituted exclusively in the courts of North Carolina located in Guilford County, and each Party irrevocably submits to the exclusive jurisdiction of such courts in any such suit, action, or proceeding. Service of process, summons, notice, or other document by mail to such Party's address set forth herein shall be effective service of process for any suit, action, or other proceedings brought in any such court. To the extent permitted by applicable law, if any action, suit, or other legal or administrative proceeding is instituted or commenced by either Party hereto against the other Party arising out of or related to this Agreement, the prevailing Party shall be entitled to recover its reasonable attorneys' fees and court costs from the non-prevailing Party, in addition to any damages and cause otherwise awarded to the prevailing Party.

20. This Agreement is for the sole benefit of the Parties hereto and their respective successors and permitted assigns and nothing herein, express or implied, is intended to or shall confer upon any other person any legal or equitable right, benefit, or remedy of any

nature whatsoever, under or by reason of this Agreement. Neither Party may assign, sublet, subcontract or transfer any interest in the Agreement without the prior written consent of the other Party.

21. This Agreement may be amended, modified, or supplemented only by an agreement in writing signed by each Party hereto. No waiver by either Party of any of the provisions hereof shall be effective unless explicitly set forth in writing and signed by the Party so waiving.

22. AT&T agrees that it shall make no statement, press releases, or publicity releases concerning this Agreement or its subject matter or otherwise disclose any of the data or other information obtained or furnished in compliance with this Agreement, or any particulars, thereof, without first notifying the City and securing its consent in writing.

23. For purposes of this Agreement

- (a) the words "include," "includes," and "including," shall be deemed to be followed by the words "without limitation";
- (b) the word "or" is not exclusive; and
- (c) the words "herein," "hereof," "hereby," "hereto," and "hereunder" refer to this Agreement as a whole.

This Agreement shall be construed without regard to any presumption or rule requiring construction or interpretation against the Party drafting an instrument or causing any instrument to be drafted. The exhibits referred to herein shall be construed with, and as an integral part of, this Agreement to the same extent as if they were set forth verbatim herein.

24. During the pendency of any dispute between the Parties arising out of or relating to this Agreement, provided that AT&T's continued performance of the Work is requested by the City in writing, it shall be the responsibility of AT&T to continue to provide the Work in conformity with the Agreement. The City shall, subject to its right to withhold amounts to cover damages allegedly caused by AT&T's breach or default under this Agreement, continue to pay AT&T any undisputed amounts in accordance with this Agreement. For the avoidance of doubt, the provisions of this section shall not apply in the event of a termination of this Agreement.

25. No provision of this Agreement shall be interpreted to require any unlawful action by either Party. If any section, subsection or clause of this Agreement is held to be invalid or unenforceable, then the meaning of that section, subsection, or clause shall be construed so as to render it enforceable to the extent feasible. If no feasible interpretation would save the section, subsection or clause, it shall be severed from this Agreement with respect to the matter in question, and the remainder of the Agreement shall remain in full force and effect. However, in the event such a section, subsection, or clause is an

essential element of the Agreement, the Parties shall promptly negotiate a replacement that will achieve the intent of such unenforceable section, subsection, or clause to the extent permitted by law.

26. This Agreement may be signed in any number of counterparts, and all such counterparts together shall constitute one and the same instrument. A signed copy of this Agreement delivered by email, shall be deemed to have the same legal effect as delivery of an original signed copy of this Agreement.

IN WITNESS WHEREOF, the Parties have caused this Agreement to be executed by their authorized representatives as of the date first above set forth.

City of High Point, NC

By: _____

Name: _____

Title: _____

Tax ID: _____

Preaudit Certificate

This instrument has been preaudited in the manner required by the Local Government Budget and Fiscal Control Act.

Bobby Fitzjohn, Finance Officer

AT&T Enterprises LLC

By: _____

Name: _____

Title: _____

EXHIBIT A

THE WORK

AT&T agrees to provide the engineering, plant protection, labor, materials, and supervision necessary to relocate the AT&T facilities using directional bore and trench methods to place new conduit and AT&T cables along with all other associated work as declared necessary in AT&T's sole judgment (the "Work").

EXHIBIT B

ESTIMATED COST

Construction & Materials	\$242,510.00
Detailed Engineering Agreements/Engineering Drawings	\$25,320.69
AT&T Inspection/Plant Protection	\$28,475.00
AT&T Cable & Splicing	\$76,700.00
Total Project Estimated Cost	\$373,005.69
TOTAL DUE (as shown on page 1)	\$373,005.69

EXHIBIT C

CERTIFICATE OF INSURANCE

CITY OF HIGH POINT

AGENDA ITEM



TITLE: Consideration of a Contract with Jobsite Technologies, Inc.

FROM:
Robby Stone
Public Services Director

MEETING DATE:
July 17, 2025

PUBLIC HEARING:
No

ADVERTISED DATE/BY:
May 21, 2025/ Re-bid June 11, 2025

ATTACHMENTS:
1. Jobsite Technologies Bid
2. Bid Tabulation

PURPOSE: To purchase two (2) GPS units to be installed on the landfill compactors to record the proper number of passes over the waste, ensuring proper compaction as well as providing the limits and side slope configuration of the landfill. Compaction reports can be provided by the software and will aid in the yearly compaction and airspace reports.

BACKGROUND: On Wednesday, June 11, 2025, the City of High Point held an informal bid opening for GPS Equipment Control. One (1) bid was received from Jobsite Technologies, Inc. in the amount of \$124,795.00

BUDGET IMPACT: Funds are available in the FY 2025-2026 Budget.

RECOMMENDED ACTION REQUESTED: City Council is requested to consider a contract with Jobsite Technologies, Inc. in the amount of \$124,795.00 for the purchase and installation of two (2) GPS units for landfill compactors and authorize the appropriate City Official(s) to execute all necessary documents.

**INVITATION TO BID
FORMAL BID**

BID # 28-061125

GPS Equipment Control

City of High Point
Purchasing/Warehouse Division
816 E Green Drive, PO Box 230
High Point, NC 27260
Phone: 336-883-4795 Fax: 336-883-3248
Greg Parret, Buyer

FORMAL BID NUMBER: 28-061125

DATE: May 21, 2025

**BIDS DUE NO LATER THAN:
Wednesday, June 11,
2025 By 2:00 PM**

BUYER: Greg Parret

greg.parret@highpointnc.gov

TELEPHONE: (336) 883-4795

**Bid price shall be FOB Destination and
include delivery to:**

City of High Point
816 E. Green St.
High Point, NC 27262

Bidder Information Form

"This contract will be considered invalid if this page is not completed in full."

-PLEASE TYPE OR PRINT LEGIBLY IN BLUE OR BLACK INK-

Vendor Name (Include d/b/a information if applicable)

Entity Formation (check applicable): ☒ Corporation ☐ Limited Liability Company ☐ Partnership ☐ Sole Proprietorship
☐ Limited Company ☐ Limited Partnership

Ownership Category (check applicable): ☒ Non-Minority ☐ African American ☐ Hispanic ☐ Asian American
☐ Socially & Economically Disadvantaged ☐ Female ☐ American Indian

1611 Hwy 74S, Suite 101
Principal Office Address (Per Secretary of State)
Peachtree City, Ga 30269
City, State & Zip
26-4218281
Farrell.joey@jst-inc.com 678-633-8155
Email Address Telephone Number

Federal Tax ID #/Social Security #

General Contractor License # (if applicable)

Larry J Farrell, Jr.
Print Name & Title of Person Signing on Behalf of Vendor

Larry J Farrell Jr.
Vendor's Authorized Signature

*** By signing above the vendor acknowledges that terms and conditions associated with this bid have been read and accepted.**

*** Failure to execute/sign this bid properly prior to submittal shall render the bid invalid and it WILL BE REJECTED.**

Late bids will NOT be accepted.

Offer valid for 60 days from date of bid opening. After this time, any withdrawal of offer shall be made in writing, effective upon receipt by the agency issuing this Invitation to Bid.

- Pursuant to General Statutes of North Carolina, Section 143-129, as amended, bids and proposals are subject to the conditions and specifications herein, are invited for materials and equipment as described herein.
- Prices or any other entry made hereon by the bidders shall be considered firm and not subject to change or withdrawal.
- Bidders certify under penalty of perjury that this bid has not been arrived at collusively and that no Federal or North Carolina antitrust laws have been violated.
- State and County sales taxes shall not be included in the bid prices. Sales tax shall be added to vendors invoice and will be paid to vendor at time of invoice payment.
- Bidders shall sign this form and return it with additional bid documents on or before the above date and time, to the City of High Point Purchasing Division, P O Box 230 (27261) and 816 East Green Drive., High Point, NC 27260.



NOTICE TO BIDDERS

Sealed proposals will be received by the Purchasing Division of the City of High Point, North Carolina, located in the Municipal Operations Center, Warehouse Building at 816 East Green Drive, High Point, NC, until **2:00 PM on Wednesday, June 11, 2025**, at which date and time they will be opened and publicly read for the following:

Bid Number: 28-061125 **GPS Equipment Control**

Copies of complete bid documents are available online at <http://www.highpointnc.gov> Government - Departments – Financial Services - Purchasing – Current Bid Opportunities and Tabulations. Documents are also available in the Warehouse/Purchasing Division, the Municipal Operations Center, 816 E Green Dr., High Point, NC. Contact: Purchasing at (336) 883-3219 or purchasing@highpointnc.gov.

The City reserves the right to reject any or all bids, in whole or in part, as may in the judgment of the Council of the City of High Point, serve its best interest and to waive irregularities and informalities in any bid submitted.

No Bid may be withdrawn after the scheduled closing time of receipt of bids for a period of sixty (60) days.

USE OF THIS BID DOCUMENT: Bids must be submitted on the forms provided herein. Bids submitted in any other format may be subject to rejection. If additional sheets are required, the bidder should make the necessary copies and insert them in the bid document or submit a separate bid document.

EXECUTION: In compliance with this Invitation for Bids, and subject to all the conditions herein, the undersigned offers and agrees to furnish and deliver any or all items upon which prices are bid, at the prices set opposite each item within the time specified herein. By executing this bid, I certify that this bid is submitted competitively and without collusion (G.S. 143-54).

BID SUBMISSION INSTRUCTIONS: Mail only one fully executed bid document, unless otherwise instructed, and only one bid per envelope. Address envelope and insert bid number as shown below. It is the responsibility of the bidder to have the bid in this office by the specified time and date of opening. All pages within this bid document are necessary parts thereof and shall not be detached, taken apart or altered. All pages of this document must be included in your bid submittal or your bid may be considered non-responsive. NO EMAIL RESPONSES WILL BE ACCEPTED.

<u>DELIVERED BY US POSTAL SERVICE</u>	<u>DELIVERED BY ANY OTHER MEANS</u>
Greg Parret, Buyer Bid #28-061125 City of High Point Warehouse/Purchasing 816 E Green Drive High Point, NC 27260	Greg Parret, Buyer Bid #28-061125 City of High Point Warehouse/Purchasing 816 E Green Drive High Point, NC 27260



REFERENCES: Vendor shall provide at least three (3) references for which your company has provided goods or services of substantially the same features and quantity to those solicited herein. The City may contact these references to determine whether the goods provided are substantially similar to those bid herein and the Vendor's performance has been satisfactory. Such information may be considered in the evaluation of the bid.

FIRM NAME	LOCATION	CONTACT	PHONE	E-MAIL
Greenville County Solid waste	Honea Path, SC	Marcia Papin	864-608- 6696	mpapin@greenville county.org
Iredell County Landfill	Statesville, NC	Teddy Boller	704-880- 4275	Tboller@iredell countync.com
macon County Landfill	Franklin, NC	Chris Stahl Jaimie Picou	828-342- 0037	Jpicou@macon nc.org

BID TABULATIONS: Bid Tabulations will be posted to the City's website

<https://www.highpointnc.gov/Bids.aspx>.

Bids will be publicly opened and bid tabulations will be posted within a couple of days of bid opening.

TRANSPORTATION CHARGES: FOB HIGH POINT, NORTH CAROLINA WITH ALL TRANSPORTATION CHARGES PREPAID AND INCLUDED IN BID PRICE.

AWARD CRITERIA: As provided by Statute, award will be based on the lowest, responsible, responsive bid(s) - most advantageous to the City of High Point as determined by consideration of:

- Price
- Quality of products offered.
- General reputation & performance capabilities of bidder
- Proven performance of equipment or goods offered.
- Conformity with intent of specifications herein
- Bidder's previous performance in contract with the City
- Conformity with the terms and conditions of this Invitation for Bid
- Adequate availability of service and parts
- Delivery

AWARD OF CONTRACT: It is the general intent to award this contract to a single overall bidder on all items. The right is reserved, however, to make awards on the basis of individual items or groups of items, if such shall be considered by the City to be most advantageous or to constitute its best interest.

The City reserves the right to reject any and/or all proposals as deemed to be in the best interest of the City.

The City reserves the right to award quantities greater or less than proposed based on funds and or need.

SCOPE: It is the intent of this Invitation for Bids to establish a vendor for GPS Equipment Control for the City of High Point's Public Services department.

QUESTIONS: All questions regarding this bid should be submitted in writing to Greg Parret at greg.parret@highpointnc.gov by 12:00 pm on May 30, 2025.

QUANTITY: The quantities provided are based on current estimates of needs. It shall be understood and agreed that during the contract period quantities purchased may be more or less than the stated estimated quantities. The City shall not be obligated to purchase in excess of its normal requirements.

MAKE AND MODEL: Manufacturer's name and model/catalog numbers, if used, are for the purpose of identification and to establish general quality level desired. Such references are not intended to be

restrictive and comparable products of other manufacturers will be considered. However, bidders are cautioned that any deviation from specifications must be pointed out in their bid.

DEVIATIONS: Any deviations from specifications and requirements herein must be clearly pointed out by the bidder. Otherwise, it will be considered that equipment or goods offered are in strict compliance with these specifications and requirements; a successful bidder will be held responsible therefore. Deviations must be explained in detail. However, the City makes no implication that deviations will be acceptable. Bidder is advised that the response (or lack thereof) on this question does not take precedence over specific responses or non-responses provided elsewhere in this bid.

SALES TAX: Do not include Sales Tax in the bid price. Sales tax shall be added to invoice and will be paid at time of invoice payment.

COST ADJUSTMENTS: The cost for all items as quoted herein shall remain firm for the contract period specified/awarded. Costs for subsequent periods and any extension term periods shall be subject to an adjustment only if increases occur in the industry. However, unless very unusual and significant changes have occurred in the industry, such increases shall not exceed 5% per year or, whichever is less, the latest yearly percentage increase in the All Urban Consumers Price Index (CPI-U) (National) as published by the Bureau of Labor Statistics, U.S. Dept. of Labor. The yearly increase or decrease in the CPI shall be that latest index published and available ninety (90) days prior to the end of the contract year then in effect compared to the index for the same month one year prior.

Any requested cost increase shall be fully documented and submitted to the City at least ninety (90) days prior to the contract anniversary date. Any approved cost adjustments shall become effective upon the anniversary date of the contract. In the event the CPI or industry costs decline, the City shall receive, from the Contractor, a reasonable reduction in costs that reflect such cost changes in the industry.

The City may, after examination, refuse to accept the adjusted costs if they are not properly documented, increases that are considered to be excessive, or decreases that are considered to be insufficient. In the event the City does not wish to accept the adjusted costs and the matter cannot be resolved to the satisfaction of the City, the contract will not be renewed and the City will rebid the contract.

Any contract extension is subject to the continuation of usage and the appropriation of funds.

ALL UNIT COSTS SHALL BE FIRM FOR THE CONTRACT PERIOD SPECIFIED.

SAMPLES: Samples are not required with the bid response; however, if required later, bidder agrees to furnish samples of items offered at no expense within five (5) consecutive calendar days after request is made. Bidders who do not comply with this requirement will be subject to rejection.

DELIVERY SITE: All pricing shall be quoted FOB Destination to the following locations:

**City of High Point
Warehouse
816 E Green Dr
High Point, NC 27260**

Specifications

General Hardware Specifics – Antenna Component.

1. All in one dual antenna unit, cab mounted GPS smart-antenna comprised of the following components: a primary and secondary GPS antenna with high accuracy tilt sensor, dedicated gyro, separate UHF antenna, GPS receiver motherboard, and vibration-dampening, temperature resistant foam surrounding the internal components of the smart-antenna.
2. Antenna will be enclosed in a ruggedized polymer shell above, with a sturdy metal cradle below; a metal frame using rare earth magnets to affix the smart-antenna to the roof of the heavy equipment is required. A simple metal housing (box or otherwise) design housing the antenna, high accuracy slope sensor or any other component for this project is unacceptable.
3. The external, cab mounted smart-antenna must include the following standards for water ingress, shock and vibration: IP69, MIL-STD81 0G, MIL-STD-202F, and IEC 60068-2.
4. **Dimensions of the Dual-Antenna** will not exceed, nor be smaller than: 68.6 L x 22 W x 12.3 H centimeters (cm).
5. Environmental specifications for the Dual-Antenna with receiver board, slope sensor Internal UHF radio and Slope sensor is expected to be as follows (with supporting manufacturer documentation): Operating temperature -40°C to +70°C (-40°F to +158°F), Humidity 95% non-condensing, shock & vibration of 50Gs, 11ms half sine pulse, 10 shocks in each direction and axis, total 60 shocks Operational IEC 60068-2-29 MIL-STD-810G Vibration Sine: 30.6Grms MIL-STD-810G SAE J1211 ISO 16750-3:2007 Vibration Random: 5.96Grms IEC 60068-2-64 MIL-STD- 202F.

General Hardware Specifics – Antenna Component (cont'd)

6. As opposed to a simple single antenna, the cab mounted Primary & Secondary antennae have distinct operational capabilities pertaining to vehicle pitch, roll, heading, and yaw. The receiver is expected to communicate (with manufacturer verification & documentation) using the following platforms: GPS, GLONASS, BeiDou, Galileo and RTK with carrier phase and L-band dual antenna across no less than 744 channels. Specifically, the greater number of satellites viewed and utilized by the landfill GPS/GNSS system will result in higher accuracy, less chance for loss of correction signal and greater uptime. The supplied system will track and communicate with no fewer than the following recognized satellites (birds):
 - a. 12 L1CA GPS
 - b. 12 L1P GPS
 - c. 12 L2P GPS
 - d. 12 L2C GPS
 - e. 15 L5 GPS
 - f. 12 G1 GLONASS
 - g. 12 G2 GLONASS
 - h. 12 G3 GLONASS
 - i. 22 B1 BeiDou
 - j. 22 B2 BeiDou
 - k. 14 B3 BeiDou
 - l. 12 Galileo E1
 - m. 12 Galileo E5a
 - n. 12 Galileo E5b
 - o. 3 SBAS or 3 additional L1CA GPS & 2 L-band
7. **Primary (GPS) antenna** will recognize and have the ability to use (at a minimum) the following available signals: GPS L1,L1P,L2C,L2P,L5 GLONASS G1,G2,Pcode BeiDou B1,B2,B3 Galileo E1,E5a,E5b and L-band. **Secondary (GPS) antenna** will recognize and have the ability to use (at a minimum) the following signals: GPS L1,L1P,L2C,L2P GLONASS G1,G2 BeiDou B1,B2 Galileo E1,E5b and L-band.
8. GPS sensitivity is an important consideration. GPS sensitivity will be between -142 and -145 *decibels referenced to one milliwatt* (dBm).
9. Heading Accuracy with the dual antenna system is optimal at 0.27° *Root Mean Squared* (RMS)
10. Pitch/Roll accuracy must be < 1° RMS
11. Cold start time for dual antenna must be < 30s (typical) – conversely warm start time must be < 5s typically.

12. Weight of cab-mounted dual antenna is required to be no more than 3.9 kg (8.58 lbs.) affixed by high-strength (rare earth) magnets. The polymer covered dual antenna must reside in a cab-mounted, rare earth magnet, magnetically affixed metal cradle. The dual antenna must have visible, embedded lights clearly showing an observer power is flowing to the unit. Communication between the dual-antenna and onboard, cab-mounted computer system will be with a single serial/power cable bulk-headed to the equipment cab. A wireless (WiFi) connection between antenna, receiver and computer is not sufficient nor requested for this project.
13. The dual-antenna must have a high accuracy, dedicated internal gyroscope and an internal tilt sensor. The internal gyro provides smooth heading, fast heading reacquisition, and reliable $< 3^\circ$ heading for periods up to 3 minutes when loss of GPS has occurred. Additionally, the tilt sensor provides pitch-and-roll data and assists in fast startup and reacquisition of heading solution. A dedicated **high-accuracy** tilt sensor & gyro are requested for this project; a simple low-accuracy computer-embedded gyro is simply not sufficient for survey grade accuracy.
14. Correction I/O protocol will include the following: the two most common RTCM v2.3 (DGPS), RTCM v3 (RTK) protocols, and the proprietary Trimble CMR, & CMR+; other less frequently used correction signal formats such as ROX, ATLAS, or JPS are not needed nor required for this project.

General Hardware Specifics – Computer Component

15. Computer must not require a docking station, or external straps for installation in the heavy equipment
16. A separate, external power (toggle) switch for the computer or any other component for this installation is unacceptable. Computer will be separately hard wired to keyed-ignition (switched power), constant power (scalable from 12 – 24 volts), and ground. The Dual antenna will tie into both power and serial connection from computer in a closed loop system.
17. The computer must have the ability to generate a stand-alone wireless LAN; IEEE 802.11 AC/a/b/g/n module with dual external SMA antennae. Please note that a separate **Wireless router** (3G/4G/5G LTE) such as a Cradle point © is not allowed. Computer must also contain an internal Micro SIM card slot for either CDMA or GSM cellular connectivity, with external SMA antenna support.
18. The Operating System must be Windows © 10 (embedded) with either 64 or 128 GB hard drive storage. The computer processor shall be no less than: (2013) Intel © **ATOM™ E3845 1.91 Ghz**.
19. Computer screen size is an important consideration for each piece of equipment. The computer will be no larger than 10" and no smaller than 8" – based on operator and management preference, and equipment internal space parameters.
20. The computer does not need an internal G-sensor, gyroscope or e-compass for the purpose of landfill GPS/GNSS development. An external tilt sensor is required for tenth-tenth-of-a-foot accuracy.
21. An embedded *computer camera* is not needed for this project; simply, it serves no conceivable purpose in building landfill cells, layers, lifts or design projects.
22. GPS within the Computer must meet the following connectivity criteria: Optional 72-Channel UBlox NEO-M8 GPS receiver. Supports: GPS/QZSS L1 C/A, GLONASS L10F, BeiDou B1, SBAS L1 C/A: WAAS, EGNOS, MSAS. External SMA connector, with Active Antenna support for enhanced GPS reception.
23. Computer and dual antenna will be fully warrantied for a 3-year period with "rental" equipment (computer, antenna or both) supplied to customer during the equipment repair period.

General Landfill Software Specifics – Requirements for specific, relevant, up-to-date software in this project

The Landfill Grade software associated with this project will include:

1. Specific landfill software, fully patented, landfill-centric, with surface-deflection compaction methods. A simple surface pass-count approach is not suitable for this project.
2. Importantly, the landfill software must be current (2020-2021) and *up-to-date*. This means significant changes, improvements, and approaches to landfill operations within the software have been developed, vetted and fielded by the manufacturer/developer/patent holder over the past 24-months. Bidder will show detailed and specific proof regarding all of their software updates, versions rollouts, bug-fixes, and the associated improvements (i.e. what has been improved upon by programming staff/code writers/engineering team etc.) in each release date – no less than three years of documented history is required.
3. On compactors, software will reads compaction on all front drums when moving forward and alternate to rear drums when traveling backward.
4. On both dozers & compactors, software will show an individual **cut/fill value** on either side of the vehicle measured to the drum or grouser in a value of 1/10th of an engineer's foot or better.
5. The software will offer the operator thirteen specific, unique operator views in the plan/design interface during operation.
6. Software will interface with cab mounted a dual-antennae to calculate heading & long slope, and simultaneously communicate with a slope sensor to calculate an accurate cross-slope, with reverse capability – negating the operator having to address the computer screen (or other switches/dials manually) in order to “flip” the vehicle heading as they travel forward or backward. In short, the software will reflect the vehicle's true heading, long slope (in ratio run/rise, rise/run or percentage), cross slope (in ratio run/rise, rise/run or percentage), height to existing surface, cut/fill to design, and cut/fill projection (in feet or meters) customizable by the user forward of the antenna.
7. The software will have the ability to control grade, show compaction patterns as specific (customizable) color-coded wheel tracks indicating path of travel and surface deflection. Software will show operators the boundaries for planned airspace. This includes the current grade and slope (long slope and cross slope), and **design** grade and slope (again, both long and cross slope) in either ratio or percentage or a rise/run method.
8. The software surface deflection will be adjustable in meters, feet, tenths and hundredths with the ability to add up to three decimal points.
9. Software should show compaction, project design, & construction information simultaneously not only in a side by side screen configuration, but in several easy to toggle through contrast-comparison views.

10. The Software will allow *any end user or operator* to quickly and accurately:
 - a. Create flat pads – storable, customizable & repeatable between operators
 - b. Develop *lift-specific projects* for each landfill – storable, repeatable, customizable
 - c. Develop custom (labeled) slopes (with up to six cross-slopes) defined by either ratio or percentage.
 - d. Develop a transparent working face boundary showing compaction by deflection wheel-tracks.
 - e. Show the user current color-coded landfill surface views in: either **surface deflection, painting, none, or existing cut/fill**.
11. The software will simultaneously display landfill design information with real-time graphical and elevation data information on the working screen.
12. Software will also realistically display:
 - a. Current (true) landfill surface (updated every 5 minutes) and the design surface on screen to scale
 - b. Each piece of heavy equipment - fully outfitted with GPS will clearly show the machine(s) position relevant to the engineered design.
13. In the operator interface, software stores and easily recalls previously created slopes, flat pads, lifts and individual operator settings.
14. Since the landfill's supplied, **engineered file(s) are the dominant file**; The Landfill software will not allow operators to create flat pads, lifts, slopes or any other project/surface exceeding the supplied final grade design of the landfill.
15. Software will easily allow landfill personnel to **over and under** build the final grade design. For example, overfilling the top-of-trash design by 2' in order to allow for settling.
16. Software will quickly and easily mark (using a point projected out to the left/right of blade, center blade, or body) any special material (asbestos, carbon black, animal carcasses, etc...), this data for later reference, retrieval and even location using a man-rover or GPS equipped machine (to within 1/10th of a foot).
17. The stored points allow operators to create any number of custom labels (asbestos, animal carcasses, fluorine powder, etc...) they wish, assign these labels to a point associated with the material(s) they are tracking. Landfill personal can then retrieve the location of the tagged material days, months or years later right from the operator's interface on the machine or on a man-rover.
18. Software will store a point on the landfill, this exact point (Northing, Easting, Elevation, Point ID#, Date/Time stamp) which is then instantly transmitted to the cloud-based data management system.
19. Software will provide fast exporting of stored points to a *time and date stamped* PDF document for quick reporting of as-built surveys, hazardous materials, and more.

20. Software will allow user to retrieve stored points, create a *.TIN file, then quickly export a *.TIN file (for surface development) from stored points.
21. Software will AUTO-store points (aka AUTO-TOPO) from GPS equipped machines, must be *completely customizable*. Collect points by time - for example, every 10 seconds a GPS shot is taken - or by distance traveled - every 10 feet/meters.
22. The Inverse between points - Software will allow users to shoot a point on the design, shoot a second point and easily see the horizontal distance, slope distance elevation distance and azimuth between both points – to within 1/10th of a foot. Users should have the ability to find an inverse by simply tapping on the touchscreen to select two points, using a GPS equipped machine (compactor or dozer) or man-rover to shoot in a point.
23. Software will allow user to shoot in several points on landfill surface and, using the landfill software, create a line from these points – then quickly transform that line to a slope using either ratio, 3:1, 4:1 etc..., or percentage, 2%, 3% slope etc....
24. Software will not require any type of conversion of landfill design or plan AutoCAD files (commonly known as *.dxf or *.dwg) provided by engineering staff. No conversion means the *.dwg or *.dxf file will not be required to be converted, changed, or altered by the software manufacturer to be usable in the computer or run by the software. This includes files or software such as *.DRW, Corel, MicroGrafx, or Business Center.
25. Software will easily display simultaneous compaction data and construction information to the equipment operator
26. Software will display *any* landfill surface to the operator, including the bottom of the cell, intermediate lifts, and top-of-waste.
27. Software will display on main working screen the machine's current elevation (to a 1/10th), cut/fill to design plan, to lift or to layer; the operator views all in real time
28. Software will allow users to quickly enable or disable data collection using a surface hot button on screen. Additionally, personnel will have the ability to easily toggle from "no data collection" to "surface deflection" to "existing surface" to "painting" or even "pass-counting" if they wish.
29. Software will show users an actual completion percentage showing the operator how compact he/she is during their shift based on the surface they have developed while in the compactor or dozer. For example, operator sees not only a change in colors based on surface changes (red, yellow, green, etc...) but also sees a percentage associated to the surface becoming more compact.

30. Software will have a **WORKFACE** feature, or transparent **Grid** feature. This allows an operator to place their vehicle on the working face, set their GPS position and heading; project their required forward, rear, L & R distance. A semi-transparent box is then projected on whatever surface the operator is working on, keeping them in a tight orderly lane on the working face while *clearly* showing their colored wheel tracks for compaction. If using tarps for cover, this feature can be customized to the actual tarp dimensions ensuring a solid fit at the end of each duty day.
31. A **PAUSE** button/feature is required in the software. If the operator is using the compactor to push waste screens, pull tarps or refueling – simply pause the data collection on the screen. Specific, simple codes in the software enable the operator to quickly select then pause the action – downtime will be identified and not affect the landfill’s data management.
32. Software will show operators (or management, engineers, etc....) clearly defined wheel tracks, customizable by specific machine, which change color based on **real-time surface changes and waste layer thickness**; the software and interface will only display compaction changes where the equipment’s drum/wheels/grousers have made contact with the surface.
33. Associated data management Software will provide operators & management with specific calculation tools, these are as follows:
- a. Calculate needed cover material (soil, clay, ADC) based on hourly or daily workload requirements. Operator then knows where to spread the cover material, and how thick material should be.
 - b. Cloud-Based platform (management software) will allow users to generate accurate, quick reports by geo-fencing and boundaries of simultaneous **landfill work zones showing** (broken down by machine if required):
 - c. Pounds per cubic yard (lb. /CY) compaction value
 - d. Total fill in cubic yards (CY) for the defined work area
 - e. Total area in square feet (Ft 2) of the work zone(s)
 - f. Cover volume (in CY) needed for the identified work zone
 - g. Average and maximum waste fill depth (in feet or meters) of the selected work zone(s)
 - h. Airspace Utilization Factor number (AUF) in **Tons/CY** for each requested work zone; two machines working in two separate areas of the working face, the software will display (in real time) the differences between each.

35. The Software's **compaction tolerances** in the computer, will be easy to access and 100% customizable based on the landfill's waste stream, temperature zone, moisture and more. These tolerances (how *much* the machine sinks into the landfill surface equals an associated color change) – will be accessed by personnel on site, or even remotely using a cellular connection embedded within the computer and not through a separate wireless router.
36. Software will display all of the following functions to the operator (and management team dialed into the machine remotely) **in real time**:
 37. Cut/fill to final grade.
 38. Cut/fill to layer.
 39. Current elevation.
 40. Cut/fill to lift.
41. Software boot-up will coincide with equipment ignition (and constant power); a toggle power switch is not acceptable. The software and hardware will be designed to immediately boot up when the machine ignition is switched on. For redundancy, all landfill data (surfaces, points, etc....) will be automatically and continuously saved/backed-up to both the onboard computer and associated data management platform throughout the day.
42. The Software will not require site daily localization to operate accurately. Upon installation, bidder will professionally survey, several **Control Points** within the landfill to establish a *localization control point (CP) file*. Using several (four to five) control points for the landfill ensures high accuracy calibration of the system. This localization CP file will then reside within the machine control computer.
43. At the end of each workday, software will automatically update the true terrain model of the existing grades. Software will compute daily cover material needed, show where hazardous materials (special waste) have been marked, compile data to generate meaningful, multifaceted reports for management including: machine activity (hourly if required), equipment idle time, available air space calculation in feet and cubic yards, compacted daily volume of trash
44. Software will be *hardware agnostic*. It will show an accurate, scaled, color-appropriate icon of all landfill vehicles (scraper, dozer, compactor, excavator, etc....) on the computer screen of the vehicle which the GPS system is mounted.
45. Software will have the ability to use the following platforms for GPS RTK signal correction: RTCM2, RTCM3, CMR, CMR+.
46. Software will communicate with the RTK Base Station using a combination of UHF and Cellular approach – for redundancy. Using only one of the two approaches is unacceptable and not allowed.

47. The GPS Base Station for this bid will have the ability to send both a UHF and a Cellular Correction signal.

48. Machine GPS Software must have the ability to display and warn operators of watch or warning areas. Both in horizontal (Gas wells) and vertical zones (Lateral Pipes)

Service and Support:

49. Local support of this system is required. Bidder will have a store or office location nearby (within 4 hours driving distance) with local service technicians to support the landfill system post-install.

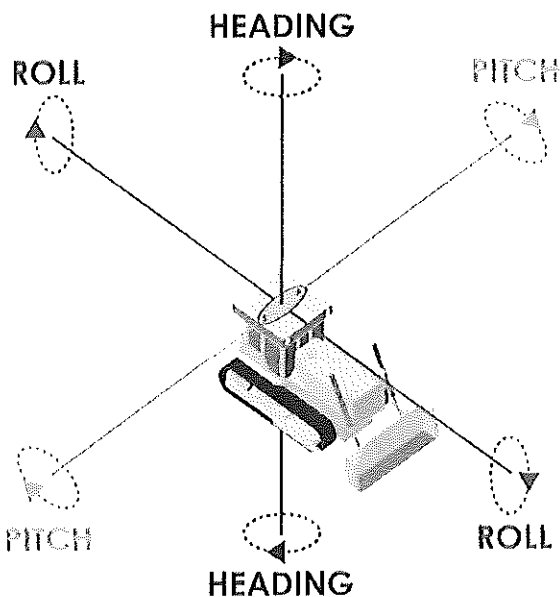
50. Annual remote and phone support is an expectation for **after-sale support**.

51. Landfill will maintain their own cellular data plan; bidder will not maintain possession of the cellular data plan, or cellular SIM cards or the County will purchase a base station to prevent from any cellular or CORS option.

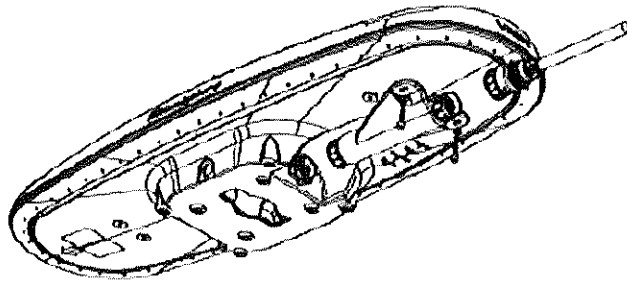
52. Under warranty, a rental/loaner of either (or both) the dual-antenna or computer is required for this bid.

#1 - #5: Using a dual CAB MOUNTED antenna is important for several reasons. First, a dual (two antennae) antenna will show both *vehicle heading* & *vehicle long slope*. Adding a slope sensor to this component shows an accurate vehicle cross-slope. A cab mounted, single antenna cannot achieve this level of accuracy – especially from a bidder not using an external, high accuracy slope sensor. One bidder actually uses the “internal G sensor, gyroscope, and e-compass” on their computer system to pass as a high accuracy slope sensor; this is a strictly misleading approach which has an accuracy of meters verses a 10th of a foot (or about 1.2 inches). Additionally, mounting a dual antenna on the cab of a piece of landfill equipment reduces the risk of the antenna becoming damaged when mounted **out on the blade**; a landfill is much different than dirt work in that the material can easily damage blade mounted equipment.

#6 - #12: This is an overview of what a high-accuracy dual antenna can provide; **accuracy is crucial**. Further, you will see the primary & secondary antenna track a variety of different satellites with a high level of GPS sensitivity, sensor performance, pitch & roll, heading accuracy (see example below) translate into consistent machine control performance that a single antenna cannot match.



Further, having a single cable connect with the cab-mounted-antenna translates to less point of failure, faster more durable signal connection with no chance of external interference.



(Above: dual antenna with a single, bulk headed cable)

#13 - #16: Why do you need high-accuracy sensors (slope/reverse) for your antenna? Without them, the equipment simply cannot give you the level of performance you are paying for. Using the proper equipment – two antennas verses one – gives the user (operator) accurate heading, and accuracy (northing, easting and elevation) to a 1/10th of a foot. Anything other than using suitable, generally accepted GPS/GNSS equipment, sensors, receivers, for the machine install is substandard at best. Using external lights on the dual-antenna shows constant power flow to the end user, negating the need to guess during trouble shooting situations. In addition, having a rugged polymer shell covering the dual-antenna will prevent bird feces and metal corrosion from damaging the internal components. Think of how some heavy equipment manufacturers wrap the cab of their heavy equipment with a plastic shell to reduce acidic bird fecal damage to the metal on the rook – same concept. Lastly, the antenna will communicate with a nearby base station using a “signal correction message”. Using the common, open platform “RTCM3” message format is the best approach giving the end user access to both American and Russian satellites, and is not proprietary.

#17 - #25: The on board computer is an integral part of the overall system. The size of the screen for example, 10” is a sufficient size for compactors & dozers; an 8” screen also works just fine for all equipment platforms without being intrusive. Anything over 10” is extreme, clumsy and has a tendency to obscure the operator view externally; using the correct size computer (screen) for the right equipment is **the professional approach** to machine control. There should also be a plan for the bidder to supply **rental equipment** to the landfill in case of equipment failure after warranty period in order to mitigate downtime.

#1 - #45 (Software): To simplify, all of these software bullet points are important in that **not all manufacturers** have dedicated the time, resources, or energy into developing a specific landfill platform. Using “surface deflection” is by far the proven, best way to compact waste, however using up to date & relevant landfill software is critical.

Each of the features listed is an example of hours of research, development and proper software employment in a landfill environment.

Converting the design/plan files provided by engineering staff *from* common AutoCAD files (*.dwg or *.dxf) is an issue. Especially when using an outdated file such as a “DRW” or using a proprietary “Business Center” platform becomes frustrating and complicated. Why do it when our system accepts common *.dwg and *.dxf files **without conversion**, that is what’s relevant, up to date software provides the end-user, constant improvement designed for specifically for landfills.

#46 - #48 (Software & Base Station): The “signal correction” from the base station is important and should (in best cases) be an **RTCM3 approach**. Why? The internationally accepted data transmission standards for GPS are defined by the Radio Technical Commission for Maritime Services organization (RTCM3), the protocol is a binary one designed to **optimize the communication throughput**.

Using both a cellular (for data transmission) and UHF (for correction signal) gives an optimal mix for landfills with questionable, weak or intermittent cellular service. Redundancy is important, but some manufactures can only offer one approach, and once the equipment is installed post-bid, the landfill has to live with intermittent correction (RTK) signal, which can dramatically affect overall GPS accuracy. We approach each landfill with focus on installing the proper base station for each landfill based on what makes sense.

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Bid Proposal Form
Bid 28-061125
GPS Equipment
Control

Item No.	Description	Quantity	Unit Price	Extended Price
1	Dual Antenna Smart-Antenna System per specifications	2	\$ 22,500.00	\$ 45,000.00
Carlson	4130.160 Vx7 GNSS			
2	Cab-Mounted Ruggedized Embedded Computer (per specs)	2	\$ 12,500.00	\$ 25,000.00
Carlson	4110.101 MC-10			
3	Landfill Grade Software (per specs)	2	\$ 12,000.00	\$ 24,000.00
Carlson	7101.101 + 1yr Carlson Command subscrip		\$ 4,000.00	\$ 4,000.00
4	Warranty (3 Years) for system	2	\$ Included	\$ N/A
5	Delivery, Setup, Installation, Training	4	\$ 1,950.00	\$ 7,800.00
Total Bid Price	4130.300BS-1 MC-Base station	1	\$18,995.00	\$ 124,795.00

Carlson

Delivery will be made within 30 days after receipt of the order.

Jobsite Technologies, Inc.
 Company Name

Lang J Farrell Jr
 Signature

Peachtree City Ga 30269
 City State Zip

6-5-25
 Date

Farrell.joey@jst-inc.com
 E-mail

678-633-8155
 Telephone Fax



June 4, 2025

**BID 28-061125
GPS Equipment Control
Addendum 1**

This addendum intends to clarify specifications and to provide responses to submitted questions as follows:

Questions and Responses

1. **How many machines is High Point looking at installing GPS on? 1 or more Landfill Compactors?**
2 Landfill Compactors.
2. **Any landfill Dozers?**
Not currently.
3. **Are you wanting a base station or NCCORS Network solution that is required to communicate with the landfill compactor or dozer?**
Base Station.
4. **Is there a GPS Handheld rover for grade checking in this bid?**
Not currently. Once awarded it would be helpful to know the price for possible later installation.
5. **Are you requiring any additional wiring kits for other machines to move the system to?**
Not currently. Once awarded it would be helpful to know the price for possible later installation.

Failure to acknowledge this addendum may result in your bid being deemed non-responsive. You may either sign and return one (1) copy of this addendum with your bid packet or acknowledge receipt of addendum on the signature page of the proposal form.

Greg Parret, Buyer
Purchasing Department

Company: Tobsite Technologies, Inc

Address: 1611 Hwy 74 Suite 101, Peachtree City, Ga 30269

Signature: Lang J Farrell Jr Date: 6-5-25

Email: Farrell.joey@jst-inc.com



June 5, 2025

Re: Bid 28-061125 GPS Equipment Control

To Whom It May Concern,

This letter is to inform you of an addition we have made to our bid. We noticed that the original bid did not include a separate line item for the itemized base station, which was a requirement outlined in the original specifications.

To ensure the bid accurately reflects all necessary components for the job, we have added a line item on The Bid Proposal Form that includes the quantity, unit price, and extended price for the base station parts. This addition aligns with the details provided in the original bid specifications. Also added, is the annual subscription fee for Carlson Command Software for landfill reporting.

Thank you for your attention to this update.

Lang J Farnell Jr

AFFIDAVIT-MINORITY PARTICIPATION

The City of High Point is committed to providing equal opportunities for participation in all aspects of the City of High Point contracting and purchasing programs including, but not limited to, participating in procurement contracts for, materials, services, construction and repair work activities, and lease agreements in the City of High Point. The Purchasing Division actively seeks to identify qualified minority, handicapped, disadvantaged, and women-owned business enterprises so as to widen opportunities for participation as providers of goods and services, increase competition and ensure the proper and diligent use of public funds.

(NOTE: THIS FORM IS TO BE SUBMITTED WITH THE BID PROPOSAL)

Portion of the Work to be performed by Minority Firms

_____ I do hereby certify that on the
(Name of Bidder)

_____ (Project Name)
Project ID# _____ Amount of Bid \$ _____

I will expend a minimum of _____% of the total dollar amount of the contract with minority business enterprises. Minority businesses will be employed as construction subcontractors, vendors, suppliers or providers of professional services. Such work will be subcontracted to the firms listed below.

Attach additional sheets if required

Name and Phone Number	Minority Category	HUB Certified (Y/N)	Work Description	Dollar Value

*Minority categories: Black, African American (B), Hispanic (H), Asian American (A) American Indian (I), Female (F) Socially and Economically Disadvantaged (D) Employee Stock Ownership Plan (ESOP)

The undersigned hereby certifies that he or she has read the terms of this commitment and is authorized to bind the bidder to the commitment herein set forth.

Date: _____ Name of Authorized Officer: _____

Signature: _____

Title: _____

ATTACHMENT C

STATE OF NORTH CAROLINA

AFFIDAVIT

CITY OF HIGH POINT

I, Larry J Farrell, Jr. (the individual attesting below), being duly authorized by and on behalf of Jobsite Technologies, Inc. (the entity bidding on project hereinafter "Employer") after first being duly sworn hereby swears or affirms as follows:

1. Employer understands that E-Verify is the federal E-Verify program operated by the United States Department of Homeland Security and other federal agencies, or any successor or equivalent program used to verify the work authorization of newly hired employees pursuant to federal law in accordance with NCGS §64-25(5).

2. Employer understands that Employers Must Use E-Verify. Each employer, after hiring an employee to work in the United States, shall verify the work authorization of the employee through E-Verify in accordance with NCGS§64-26(a).

3. Employer is a person, business entity, or other organization that transacts business in this State and that employs 25 or more employees in this State. (mark Yes or No)

a. YES _____, or

b. NO X

4. Employer's subcontractors comply with E-Verify, and if Employer is the winning bidder on this project Employer will ensure compliance with E-Verify by any subcontractors subsequently hired by Employer.

This 5 day of June, 2025

Signature of Affiant

Print or Type Name: Larry J Farrell

State of Georgia County of Fayette

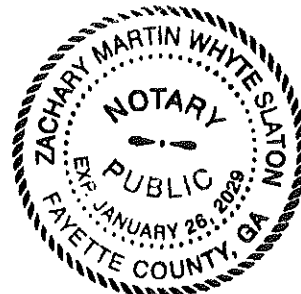
Signed and sworn to (or affirmed) before me, this the 5

day of June, 2025.

My Commission Expires: 1/26/2029

[Signature]
Notary Public

(Affix Official/Notarial Seal)



Attachment D

NON-COLLUSION AFFIDAVIT

State of North Carolina
City of High Point

Larry J Farrell, Jr., being first duly sworn, deposes and says that:

1. He/She is the owner of Jobsite Technologies the Proposer that has submitted the attached proposal;
2. He/She is fully informed respecting the preparation and contents of the attached Proposal and of all pertinent circumstances respecting such Proposal;
3. Such Proposal is genuine and is not a **collusive** or **sham** Proposal;
4. Neither the said Proposer nor any of its officers, partners, owners agents, representatives, employees or parties of interest, including this affidavit, has in any way colluded, conspired, connived or agreed, directly or indirectly, with any other Proposer, firm or person to submit a **collusive** or **sham** Proposal in connection with the contract for which the attached Proposal has been submitted or to refrain from bidding in connection with such contract, or has in any manner, directly or indirectly, sought by agreement or collusion or communication or conference with any other Proposer, firm or person to fix the price or prices in the attached Proposal or of any other Proposer, or to fix any overhead, profit or cost element of the Proposal price of any other Proposer or to secure through collusion, conspiracy, connivance or unlawful agreement any advantage against the City of High Point or any person interested in the proposed contract; and
5. The price or prices quoted in the attached Proposal are fair and proper and are not tainted by any collusion, conspiracy, connivance or unlawful agreement on the part of the Proposer or any of its agents, representatives, owners, employees, or parties in interest, including this affidavit.

Randy Farrell
Signature of Proposer

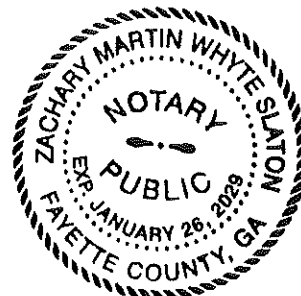
6-5-25
Date

Subscribed and sworn before me,
this 5th day of June, 2025

Zachary Martin Whyte-Slaton
Notary Public

Notary Public
My Commission Expires: 1/26/2029

(Seal)



INSTRUCTIONS TO BIDDERS

GENERAL: All bids are subject to the provisions of the attached General Contract Terms and Conditions. All bid responses will be controlled by the Terms and Conditions included by the City of High Point. Bidder terms and conditions included as a part of published price lists, catalogs, and/or other documents submitted as a part of the bid response are waived and will have no effect either on the bid, or any contract which may be awarded as a result of this bid.

The attachment of any additional terms and conditions by any vendor or bidder is expressly rejected here and shall not be incorporated into the bid. Attachment of any additional terms and conditions may be grounds for rejection of the bid by the City.

Bidder specifically agrees to the conditions set forth in this paragraph by signature of the "BID" contained herein.

Pursuant to G.S. 143-48 and Executive Order No. 77, the State invites and encourages participation in this procurement by a business owned by minorities, women, and the Disabled.

MAKE AND MODEL: Indicate manufacturers' name and model number of item(s) offered in the spaces provided. The purpose of these specifications is to identify and establish general quality level desired. Any references to brand names are not intended to be restrictive and comparable products of other manufacturers will be considered. However, bidders are cautioned that any deviation from specifications must be pointed out in their bid. **Complete descriptive literature and manufacturer's specifications shall be included in the bid.**

WARRANTY: Equipment shall be new and shall be guaranteed against defect in materials, workmanship, and performance in accordance with the manufacturer's standard warranty, except that in no event shall such coverage be less than one (1) year. Warranty coverage shall begin on the date of acceptance by the City of High Point. **Warranty service shall be available on site** at any location within the state of North Carolina. Defective units shall be repaired or replaced during the warranty period at no cost to the City of High Point or its representative.

INSTRUCTION BOOK: The vendor shall furnish a booklet or pamphlet giving complete instructions for the operation, lubrication, adjustment, and care of the equipment.

TRAINING: Quoted price to include comprehensive training for technicians and operators. All training and materials shall be provided by successful bidder at no additional cost to the City of High Point. Training shall include troubleshooting and proper operation of all equipment.

SAFETY: The successful bidder shall be required to take safety precautions in an effort to protect persons and City property. All contractors and sub-contractors shall conform to all OSHA, State and County regulations while performing under the terms and conditions of this contract. Any fines levied by the above mentioned authorities because of inadequate compliance with these requirements shall be borne solely by the successful bidder which is responsible for same. Barriers shall be provided by the successful bidder when work is performed in areas traversed by persons or when deemed necessary by the City.

DEMONSTRATION: Bidder must be capable of demonstrating proposed equipment within seven (7) consecutive calendar days after notification at no additional cost to the City. If required, this will be a comprehensive demonstration at a site designated by the City with hands-on participation by agency operator(s) if necessary. Bids that fail to comply with this requirement may be subject to rejection.

EQUIPMENT AND ACCESSORIES: All equipment and accessories listed as standard items in the manufacturer's current product literature, but not listed in these specifications shall be included with the equipment.



SERVICE UPON DELIVERY: Equipment shall be complete, serviced and ready for operation. The City will only accept and approve for payment equipment that is complete in every respect and ready for operation.

STANDARD PRODUCTION MODEL: It is a requirement that the equipment herein requested be the "standard production model of the latest design". To meet this requirement the equipment offered shall be new and the latest production model as represented in the manufacturer's current published literature intended for the general public. Such literature must represent the specific configuration offered. Equipment offered otherwise may be subject to rejection.

CLEAN UP: Upon completion of the equipment delivery, the bidder shall remove and properly dispose of all packaging waste and debris from the user's site. The bidder shall be responsible for leaving the delivery areas clean and ready to use.

The omission of any standard feature described herein shall not void the bidder's responsibility to furnish a complete system with all standard equipment of the manufacturer's latest model in current production. The bidder shall represent by their bid that all equipment to be furnished shall be new and unused. The unit, as specified, shall be completely assembled and adjusted and all equipment, standard and optional will be installed and ready for use. The following specifications are the minimum acceptable specifications and failure to comply may be used as basis for rejection of bid. If the equipment offered differs from the provisions contained herein, these differences must be explained in detail. Bidder must include copy of printed manufacturer's specification sheet with bid.

INSURANCE: Successful bidder shall be required to provide insurance as required in Section 17 of the General Terms and Conditions.

SPECIFICATIONS: Manufacturer's name and catalog numbers used in this bid are product specific unless the description states equivalent acceptable. These products are required for compatibility and continuity of support.

BID EVALUATION: The City of High Point reserves the right to reject any bid on the basis of the function, compatibility with user requirements, as well as cost. The City of High Point reserves the right to award this contract to a single overall bidder on all items, or to make award on the basis of individual items or groups of items, whichever shall be considered by the City of High Point to be most advantageous or to constitute its best interest. Bidders should show unit prices, but are requested to offer a lump sum price. The City of High Point will not be bound by oral discussions during evaluation process. Responsible purchasing agent should approve all contact regarding this award.

CANCELLATION: The City of High Point may terminate/cancel this contract at any time by providing written notice to the bidder at least thirty (30) days before the effective date of termination/cancellation.

SERVICE: Adequate and satisfactory availability of repair parts and supplies, and ability to meet warranty and service requirements are necessary. The City of High Point reserves the right to satisfy itself by inquiry or otherwise as to bidder's capability in this regard.

BID RESULTS: For bid results email Greg Parret at Greg.Parret@highpointnc.gov NO LESS THAN TWO DAYS following the bid close date.

***** THE CITY OF HIGH POINT WILL NOT BE BOUND BY ORAL DISCUSSION REGARDING THIS INVITATION FOR BID *****

QUESTIONS: Questions regarding the specifications on this bid should be referred to the Purchasing Department.

SPECIAL INTEREST GROUP DEFINITIONS:

Women Owned (51% and controlled by Women)

Disabled Owned (51% owned & controlled by a Physically Disabled Person)

Minority Owned (At least 51% of which is owned and controlled by minority group member. (Black, Asian American, Hispanic, American Indian, Socially and Economically Disadvantaged)

GENERAL TERMS AND CONDITIONS

1. **ACCEPTANCE AND REJECTION**: The City of High Point reserves the right to reject any and all bids, to waive any informality in bids, and unless otherwise specified by the bidder, to accept any item in the bid. If either a unit price or extended price is obviously in error or the other is obviously correct, the incorrect price will be disregarded.
2. **TIME FOR CONSIDERATION**: Unless otherwise indicated on the first page of this document, the offer shall be valid for 45 days from the date of bid opening. Preference may be given to bids allowing not less than 45 days for consideration and acceptance.
3. **TAXES**: No taxes shall be included in any bid prices.
 - a. **FEDERAL**: Generally, states and political subdivisions are exempt from such taxes, as excise and transportation. Exemption is claimed under Registry No. 56-70-0047K as provided by Chapter 32 of the Internal Revenue Code.
 - b. **OTHER**: Bid prices are not to include any sales, import, or personal property taxes. To the extent applicable, they are to be invoiced as a separate item(s).
4. **PRICE ADJUSTMENTS**: Any price changes, downward or upward, which might be permitted during the contract period must be general, either by reason of market change or on the part of the bidder to other customers.
 - a. **NOTIFICATION**: Must be given to the City of High Point Purchasing Department, in writing, concerning any proposed price adjustments. Such notification shall be accompanied by copy of manufacturers' official notice or other evidence that the change is general in nature.
 - b. **DECREASES**: The City of High Point shall receive full proportionate benefit immediately at any time during the contract period.
 - c. **INCREASES**: All prices offered herein shall be firm against any increase for 180 days from effective date of the proposed contract. After this period, a request for increase may be submitted with the City of High Point reserving the right to accept or reject the increase, or cancel the contract. Such action by the City of High Point shall occur not later than 15 days after receipt and review by the City of High Point of a properly documented request for price increase. Any increases accepted shall become effective on a date to be determined by the City of High Point which:
 - 1) Shall not be later than 30 days after the expiration of the original 15 days reserved by the City of High Point to evaluate the request for increase;
 - d. **INVOICES**: It is understood and agreed that orders will be shipped at the established contract prices in effect on dates orders are placed. Invoicing at variance with this provision will subject the contract to cancellation. Applicable North Carolina sales tax shall be invoiced as a separate item.
5. **PAYMENT TERMS**: Payment terms are Net, 30 days after receipt of correct invoice or acceptance of goods, whichever is later. The City of High Point is responsible for all payments under the contract.
6. **AFFIRMATIVE ACTION**: The successful bidder will take affirmative action in complying with all Federal and State requirements concerning fair employment and employment of the Disabled, and concerning the treatment of all employees, without discrimination by reason of race, color, religion, sex, national origin, or physical handicap.



7. **CONDITION AND PACKAGING:** Unless otherwise indicated in the bid, it is understood and agreed that any item offered or shipped on this bid shall be new and in first-class condition, that all containers shall be new and suitable for storage or shipment, and that prices include standard commercial packaging.
8. **PERFORMANCE BOND AND DEFAULT:** The City of High Point reserves the right to require performance bonds from a successful bidder, as provided by law, without expense to the City. Otherwise, in case of default by the Bidder, the City may procure the articles or services from other sources and hold the Bidder responsible for any excess cost occasioned thereby. Default shall occur if the Bidder fails to perform any obligation under the contract and schedule and such failure remains uncured for more than thirty (30) days after receipt of written notice thereof from the City of High Point.
9. **SAMPLES:** Samples of items, when required, must be furnished as stipulated herein, free of expense, and if not destroyed will, upon request, be returned at the bidder's expense. Request for the return of samples must be made within 10 days following the opening of bids. Otherwise, the samples will become the City of High Point property. Each individual sample must be labeled with the bidder's name and item number. Samples, on which an award is made, will be retained for the contract period. These will be returned if requested, ten days prior to the expiration of the contract.
10. **SPECIFICATIONS:** Any deviation from specifications indicated herein must be clearly pointed out; otherwise, it will be considered that items offered are in strict compliance with these specifications, and the successful bidder will be held responsible therefore. Deviations must be explained in detail on an attached sheet(s).

The bidder shall not construe this paragraph as inviting deviation or implying that any deviation will be acceptable.

11. **SAFETY STANDARDS:** All manufactured items and/or fabricated assemblies subject to operation under pressure, operation by connection to an electric source, or operation involving a connection to a manufactured, natural, or LP gas source shall be constructed and approved in a manner acceptable to the appropriate state inspector which customarily requires the label or re-examination listing or identification marking of the appropriate safety standard organization, such as the American Society of Mechanical Electrical Engineers for pressure vessels; the Underwriters' Laboratories and/or National Electrical Manufacturers' Association for electrically operated assemblies; or the American Gas Association for gas operated assemblies, where such approvals of listings have been established for the type(s) of devices offered and furnished. Further, all items furnished by the successful bidder shall meet all requirements of the Occupational Safety and Health Administration (OSHA), and state and federal requirements relating to clean air and water pollution.

All bidders must comply with *North Carolina Occupational Safety and Health Standards for General Industry, 29CFR 1910*. Construction bidders must comply with *North Carolina Occupational Safety and Health Standards for the Construction Industry, 29CFR 1926*. In addition, bidders shall comply with all applicable occupational health and safety and environmental rules and regulations. Bidders shall effectively manage their safety and health responsibilities including:

1. **Accident Prevention**

Prevent injuries and illnesses to their employees and others on or near their job site. Bidder managers and supervisors shall ensure employer's personnel safety by strict adherence to established safety rules and procedures.

2. **Environmental Protection**

Protect the environment on, near, and around their work site by compliance with all applicable environmental regulations.



3. **Employee Education and Training**

Provide education and training to all bidders' employees before they are exposed to potential workplace or other hazards as required by specific OSHA Standards.

12. **INFORMATION AND DESCRIPTIVE LITERATURE:** Bidders are to furnish all information requested and, in the spaces, provided on the bid form. Further, as may be specified elsewhere, each bidder must submit with his/her proposal: cuts, sketches, descriptive literature, and/or complete specifications covering the products offered. Reference to literature submitted with a previous bid does not satisfy this provision. Bids which do not comply with these requirements will be subject to rejection.
13. **PROMPT PAYMENT DISCOUNTS:** Bidders are urged to compute all discounts into the price offered. If a prompt payment discount is offered, it will not be considered in the award of the contract except as a factor to aid in resolving cases of identical prices.
14. **AWARD OF CONTRACT:** As directed by statute, qualified bids will be evaluated and acceptance made of the lowest, responsible, responsive, and best bid most advantageous to the City of High Point as determined upon consideration of such factors as: prices offered; the quality of the articles offered; the general reputation and performance capabilities of the bidders; the substantial conformity with the specifications and other conditions set forth in the bid; the suitability of the articles for the intended use; the related services needed; the date or dates of delivery and performance; and such other factors deemed by the City to be pertinent or peculiar to the purchase in question. Unless otherwise specified by the City or the bidder, the City reserves the right to accept any items or groups of items on a multi-item bid.

The City reserves the right to make partial, progressive, or multiple awards where it is advantageous to award separately by items, or where more than one supplier is needed to provide the contemplated requirements as to quantity, quality, delivery, service, geographical areas, and/or other factors deemed by the City of High Point to be pertinent or peculiar to the purchase in question.

15. **GOVERNMENTAL RESTRICTIONS:** In the event any Governmental restrictions may be imposed which would necessitate alteration of the material, quality, workmanship, or performance of the items offered on this proposal prior to their delivery, it shall be the responsibility of the successful bidder to notify the City of High Point Purchasing Department at once, indicating in his/her letter the specific regulation which required such alterations. The City of High Point reserves the right to accept any such alterations, including any price adjustments occasioned thereby, or to cancel the contract.
16. **M/WBE:** Pursuant to General Statute 143-48 and Executive Order #77, the City of High Point invites and encourages participation in this procurement process by businesses owned by minorities, women, and the Disabled. Only businesses certified by the NC Historically Underutilized Business (HUB) Office shall count toward MWBE participation. Respondents shall make good faith efforts to contact minority, women, Disabled or disadvantaged-owned businesses to allow each an equal opportunity to participate in any portion of the scope of the particular work involved. Bids shall include MWBE information and documentation.

17. **INSURANCE:**

COVERAGE - During the term of the contract, the bidder at its sole cost and expense shall provide commercial insurance of such type and with such terms and limits as may be reasonably associated with the contract. As a minimum, the bidder shall provide and maintain the following coverage and limits:

a. Worker's Compensation - The bidder shall provide and maintain Worker's Compensation Insurance, as required by the laws of North Carolina, as well as employer's liability coverage with minimum limits of \$500,000.00, covering all bidders' employees who are engaged in any work under the contract. If any work is sublet, the bidder shall require the subcontractor to provide the same coverage for any of his/her employees engaged in any work under the contract.



- b. **Commercial General Liability** - General Liability Coverage, on a Comprehensive Broad Form on an occurrence basis in the minimum amount of \$1,000,000.00 Combined Single Limit. (Defense cost shall be in excess of the limit of liability.)
- c. **Automobile** - Automobile Liability Insurance, to include liability coverage, covering all owned, hired, and non-owned vehicles used in connection with the contract. The minimum combined single limit shall be \$1,000,000.00 bodily injury and property damage; \$100,000.00 uninsured/under-insured motorist; and \$1,000.00 medical payment.

REQUIREMENTS: Providing and maintaining adequate insurance coverage is a material obligation of the bidder and is of the essence of this contract. All such insurance shall meet all laws of the State of North Carolina. Such insurance coverage shall be obtained from companies that are authorized to provide such coverage and that are authorized by the Commissioner of Insurance to do business in North Carolina. The bidder shall at all times comply with the terms of such insurance policies, and all requirements of the insurer under any of such insurance policies, except as they may conflict with existing North Carolina laws or this contract. The limits of coverage under each insurance policy maintained by the bidder shall not be interpreted as limiting the bidder's liability and obligations under the contract. It is agreed that the coverage as stated shall not be canceled or changed until thirty (30) days after written notice of such termination or alteration has been sent by registered mail to the City of High Point Purchasing Department.

18. **PATENTS AND COPYRIGHTS:** The Bidder shall hold and save the City of High Point, its officers, agents, and employees, harmless from liability of any kind, including costs and expenses on account of any patented or unpatented invention, articles, device, or appliance manufactured or used in the performance of this contract, including use by the government.

Any and all copy, art, designs, negatives, photographs, or other tangible items created pursuant to the bidder's performance of this project shall be the property of the City of High Point and shall be delivered to the City upon completion of the project. Such property shall be transferred to the City in excellent, reusable condition.

In addition, the copyright in and to any copyrightable work, including, but not limited to, copy, art, negatives, photographs, designs, text, software, or documentation created as part of the bidder's performance of this project shall vest in the City, and the bidder agrees to assign all rights therein to the City. Bidder further agrees to provide the City with any and all reasonable assistance, which the City may require to obtain copyright registrations or to perfect its title in any such work, including the execution of any documents submitted by the City.

19. **PATENT AND COPYRIGHT INDEMNITY:** BIDDER will defend or settle, at its own expense, any action brought against Customer to the extent that it is based on a claim that the product(s) provided pursuant to this agreement infringe any U.S. copyright or patent; and will pay those costs, damages, and attorney's fees finally awarded against Customers in any such action attributable to any such claim, but such defense, settlements, and payments are conditioned on the following (1) that BIDDER shall be notified promptly in writing by Customer of any such claim; (2) that BIDDER shall have sole control of the defense of any action on such claim and of all negotiations for its settlement or compromise; (3) that Customer shall cooperate with BIDDER in a reasonable way to facilitate the settlement of defense of such claim; (4) that such claim does not arise from Customer modifications not authorized by the BIDDER or from the use of combination of products provided by the BIDDER with products provided by the Customer or by others; and (5) should such product(s) become, or in the BIDDER's opinion likely to become, the subject of such claim of infringement, then Customer shall permit BIDDER, at BIDDER's option and expense, either to procure for Customer the right to continue using the product(s), or replace or modify the same so that it becomes non-infringing and performs in a substantially similar manner to the original product; or (c) upon failure of (a) or (b) despite the reasonable efforts of the BIDDER for a sold product or licensed software, return the price paid for the licensed software and any product dependent thereon.



20. **ADVERTISING:** Bidder agrees not to use the existence of this contract or the name of the City of High Point as a part of any commercial advertising without prior approval of the City of High Point Purchasing Department.
21. **EXCEPTIONS:** All proposals are subject to the terms and conditions outlined herein. All responses will be controlled by such terms and conditions and the submission of other terms and conditions, price catalogs, and other documents as part of a Bidder's response will be waived and have no effect on this Request for Proposal or any other contract that may be awarded resulting from this solicitation. The submission of any other terms and conditions by a Bidder may be grounds for rejection of the Bidder's proposal. The Bidder specifically agrees to the conditions set forth in the above paragraph by affixing his name on the signatory page contained herein.
22. **CONFIDENTIAL INFORMATION:** As provided by statute and rule, the City of High Point will consider keeping trade secrets which the bidder does not wish to be DISCLOSED confidential. Each page shall be identified in boldface at the top and bottom as "CONFIDENTIAL" by the bidder. Cost information shall not be deemed confidential. In spite of what is labeled as a trade secret, the determination whether it is or not will be determined by North Carolina law.
23. **ASSIGNMENT:** No assignment of the bidder's obligations nor the bidder's right to receive payment hereunder shall be permitted. However, upon written request approved by the City of High Point Purchasing Department, solely as a convenience to the bidder, the City of High Point may:
- a. Forward the bidder's payment check directly to any person or entity designated by the bidder, and
 - b. Include any person or entity designated by the bidder as a joint payee on the bidder's payment check.
- In no event shall such approval and action obligate the City of High Point to anyone other than the bidder and the bidder shall remain responsible for fulfillment of all contract obligations.
24. **ACCESS TO PERSONS AND RECORDS:** The City Auditor shall have access to persons and records as a result of all contracts or grants entered into by the City in accordance with General Statute 147-64.7.
25. **INSPECTION AT BIDDER'S SITE:** The City of High Point reserves the right to inspect, at a reasonable time, the equipment/item, plant or other facilities of a prospective bidder prior to contract award, and during the contract term as necessary for the City of High Point's determination that such equipment/item, plant, or other facilities conform with the specifications/requirements and are adequate and suitable for the proper and effective performance of the contract.
26. **AVAILABILITY OF FUNDS:** Any and all payments of compensation of this specific transaction, its continuing or any renewal or extension, are dependent upon and subject to the allocation of appropriation of funds to the City for the purpose set forth in this agreement.
27. **GOVERNING LAWS:** All contracts, transactions, agreements, etc., are made under and shall be governed by and construed in accordance with the laws of the State of North Carolina.
28. **ADMINISTRATIVE CODE:** Bids, proposals, and awards are subject to applicable provisions of the North Carolina Administrative Code.
29. **EXECUTION:** Failure to sign under EXECUTION section will render bid invalid.



30. **ORDER OF PRECEDENCE:** In cases of conflict between specific provisions in this bid, the order of precedence shall be (1) special terms and conditions specific to this bid, (2) specifications, (3) City of High Point General Contract Terms and Conditions, and (4) City of High Point Bid Terms and Conditions.
31. **CLARIFICATIONS/INTERPRETATIONS:** Any and all questions regarding this document must be addressed to the City named on the cover sheet of this document. Do not contact the user directly. Any and all revisions to this document shall be made only by written addendum from the City of High Point Purchasing Department. The bidder is cautioned that the requirements of this bid can be altered only by written addendum and that verbal communications from whatever source is of no effect.
32. **SITUS:** The place of all contracts, transactions, agreements, their situs and forum, shall be North Carolina, where all matters, whether sounding in contract or tort, relating to the validity, construction, interpretation, and enforcement shall be determined.





CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)
05/23/2025

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER Patricia A Trice 31 MARKET SQUARE RD STE 104 NEWNAN, GA 30265 (678) 734-9560 (053/324)	CONTACT NAME Patricia A Trice PHONE (678) 734-9560 FAX (855) 732-3346 E-MAIL ptrice@amfam.com ADDRESS
INSURED Jobsite Technologies Inc. 611 Hwy 74S Suite 101 Peachtree City, GA 30269	INSURER(S) AFFORDING COVERAGE INSURER A: Mount Vernon Fire Insurance Company INSURER B: Liberty Mutual INSURER C: Progressive Commercial INSURER D: INSURER E: INSURER F:
	NAIC # 10386

COVERAGES	CERTIFICATE NUMBER:	REVISION NUMBER:
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THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSR	SUBR VWD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS
A	AUTOMOBILE LIABILITY ☐ ANY AUTO ☐ ALL OWNED AUTOS ☒ HIRED AUTOS ☐ ☐ SCHEDULED AUTOS ☒ NON-OWNED AUTOS ☐	Y	Y	969197605	04/28/2025	04/28/2026	BODILY INJURY (Per person) \$ 2,000,000 BODILY INJURY (Per accident) \$ 2,000,000 PROPERTY DAMAGE (Per accident) \$ 2,000,000 BODILY INJURY \$ 2,000,000 \$
A	☒ COMMERCIAL GENERAL LIABILITY ☐ CLAIMS-MADE ☒ OCCUR ☐ GEN'L AGGREGATE LIMIT APPLIES PER: ☒ POLICY ☐ PROJECT ☐ LOC ☐ OTHER	Y	Y	CP 2630533	09/01/2024	09/01/2025	EACH OCCURRENCE \$ 3,000,000 DAMAGE TO RENTED PREMISES (Each occurrence) \$ 100,000 MED EXP (Any one person) \$ 5,000 PERSONAL & ADV INJURY \$ 1,000,000 GENERAL AGGREGATE \$ 5,000,000 PRODUCTS - COM/PROP AGG \$ 2,000,000 \$
A	☒ UMBRELLA LIAB ☒ OCCUR ☐ EXCESS LIAB ☐ CLAIMS-MADE ☐ DED ☐ RETENTION \$	Y	Y	XL 1598594	09/01/2024	09/01/2025	EACH OCCURRENCE \$ 1,000,000 AGGREGATE \$ 1,000,000 \$
A	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below	Y/N Y	N/A Y	XWS2060376521	09/30/2024	09/30/2025	☒ PER STATUTE ☐ OTHER E.L. EACH ACCIDENT \$ 500,000 E.L. DISEASE - EA EMPLOYEE \$ 500,000 E.L. DISEASE - POLICY LIMIT \$ 500,000
A	Professional Liability	Y	Y	CP2630533-1	09/01/2024	09/01/2025	\$1,000,000.00

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)
Inland Marine Coverage Policy CPS7663045 09/08/2024 - 09/08/2025 for \$133,200 to cover project materials
Texas Location - GL Policy MCP019SD540 each occurrence \$1,000,000 with \$2,000,000 aggregate.

CERTIFICATE HOLDER 24 City of High Point P.O. BOX 230 High Point, NC 27261	CANCELLATION SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS. AUTHORIZED REPRESENTATIVE: Candi Brooks
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Carlson Machine Control Pro Base Station



Multi-frequency, multi-constellation GNSS positioning together with GNSS, L-Band positioning and wireless communications within a rugged IP67 housing.

KEY FEATURES

- 544 channels for tracking all known and planned signals from GPS, GLONASS, Galileo, BeiDou, IRNSS, QZSS and SBAS on both antennas
- Precise and solid heading
- Centimetre-level (RTK) and sub decimetre-level (PPP) position accuracy
- Dual L-band channel with support for SECORX corrections
- GNSS+ algorithms for reliable performance
- Integrated cellular modem, Bluetooth and WiFi optional UHF radio

Consistently accurate now and into the future

The Carlson Machine Control Pro Base Station is powered by the receiver from Carlson. Its engine can track all current and planned Global Navigation Satellite System (GNSS) constellations: GPS, GLONASS, Galileo, BeiDou, IRNSS and QZSS.

Centimetre scalable accuracy

Carlson's knowledge and experience in the GNSS industry ensures that the Pro Base Station offers you the highest possible accuracy. LOCK+ technology maintains tracking during heavy vibration and IONO+ ensures position accuracy even under periods of elevated ionospheric activity. The Pro Base Station offers the very latest in special interference mitigation technology which filters out ambient intentional and unintentional RF interference.

Any device, any platform

Use any device with a web browser to operate the Pro Base Station without any special configuration software via the Web UI accessible over WiFi network or USB connection.



Learn more: www.carlsonmachinecontrol.com
or contact at: info@carlsonmachinecontrol.com

BREAK NEW GROUND

FEATURES

GNSS Technology

544 Hardware channels for simultaneous tracking of all visible satellite signals

Supported signals: GPS: L1, L2, L5
 GLONASS: L1, L2, L3
 Galileo: E1, E5ab, AltBoc, E6I
 BeiDou: B1, B2, B3I
 SBAS: EGNOS, WAAS, GAGAN, MSAS, SDCM (L1, L5)
 IRNSS: L5I
 QZSS: L1, L2, L5, L6

Carlson's GNSS+ technologies:

- **AIM+** interference mitigation unit against narrow system against narrow and wideband interference with spectrum analyser
- **IONO+** advanced scintillation mitigation
- **APME+** a posteriori multipath estimator for code and phase multipath mitigation.
- **RAIM** (Receiver Autonomous Integrity Monitoring) RTK (base and rover)¹

Integrated dual-channel L-band receiver
 Support for PPP (SeCoRx-60)^{1,2}
 Moving base³
 GNSS attitude⁴
 8 GB internal memory

Formats

RTCM v2x and 3x (MSM included)
 CMR 2.0 and CMR+ (CMR+ input only)
 NMEA 0183, v2.3, v3.01, v4.0 (output only)
 UHF1: Satel, Trimtalk (450S_P, 450S_T) Pacific
 Crest (GMSK, 4FSK, FST)

Connectivity

3 Hi-speed serial ports (RS232)
 Ethernet port (TCP/IP and UDP)
 Full-speed USB
 2 Event markers
 xPPS output (max. 100 Hz)
 Integrated Bluetooth (2.1 + EDR/4.0)
 Integrated Quadband Cellular Modem (EDGE, 2G, 3G, 3.5G)
 Integrated WiFi (802.11 b/g/n)
 Integrated UHF (406-470 MHz)⁴

PERFORMANCE

Position Accuracy^{4,5}

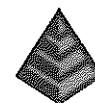
	Horizontal	Vertical
Standalone	1.2 m	1.9 m
SBAS	0.6 m	0.8 m
DGNSS	0.4 m	0.7 m
SECORX-D ⁶ (PPP)	4 cm	9 cm
SECORX-C ⁶ (PPP)	4 cm	6 cm
SECORX-60 ^{2,6} (PPP)	4 cm	6 cm

RTK Performance^{4,5,7,8}

Horizontal accuracy 0.6 cm + 0.5 ppm

- 1 Optional feature
- 2 Service subscription required
- 3 Maximum output rate is 20 Hz
- 4 Open sky conditions
- 5 RMS levels

- 6 After convergence
- 7 RTK fixed ambiguities
- 8 Baseline < 40 Km
- 9 99.9%
- 10 Inert software compensation of sawtooth effect



Vertical accuracy Initialisation

GNSS attitude accuracy^{4,5}

Antenna separation	Pitch/Roll
1 m	0.25°
5 m	0.05°

Velocity accuracy^{4,5} 0.03 m/s

Maximum Update Rate

Position	50 Hz
Position and attitude	20 Hz
Measurements	100 Hz

Latency⁹ <20 ms

Time accuracy

xPPS Out ¹⁰	10 ns
Event accuracy	< 20 ns

Time to first fix

Cold Start ¹¹	< 45 s
Warm Start ¹²	< 20 s
Re-acquisition avg.	1 s

Tracking performance (C/N0 threshold)¹³

Tracking	20 dB-Hz
Acquisition	33 dB-Hz

PHYSICAL AND ENVIRONMENTAL

Size	174 x 166 x 53 mm / 6.85 x 6.54 x 2.09 in
Weight	1.5 kg / 3.30 lb
Input Voltage	9-36 VDC
Power Consumption	7 W typical
Operating temperature	-30° C to +65° C / -22° F to 149° F
Storage temperature	-40° C to +75° C / -40° F to 167° F
Humidity	MIL-STD-810G, Method 507.5, Procedure I
Dust	MIL-STD-810G, Method 510.5, Procedure I
Shock	MIL-STD-810G, Method 516.6, Procedure I/II
Vibration	MIL-STD-810G, Method 514.6, Procedure I

Connectors

Antennas	TNC female
Power	LEMO 4 pins female
USB/ETH	LEMO 16 pins female
PPS OUT	LEMO 5 pins female
Serial 2	LEMO 9 pins female
Serial 1 & 3 USB Host	LEMO 14 pins female
Events/GPIO	LEMO 7 pins female

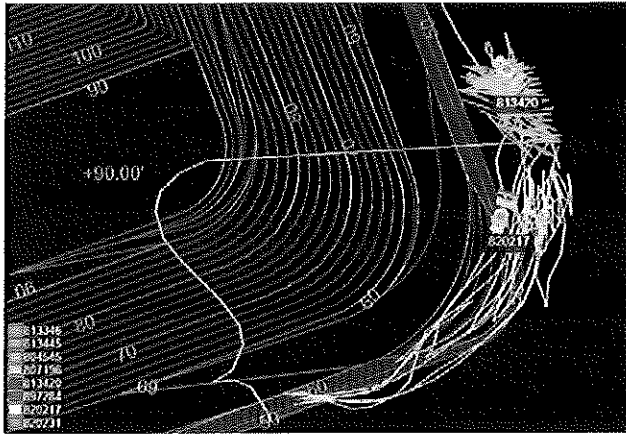
Antenna LNA Power Output

Output voltage	5 VDC
Maximum current	200 mA

Certification

IP67, RoHS, WEEE, CE / FCC Class B Part 15 / IEC 60945

Carlson Command



**Carlson Machine Control's
office software for data
collection, analysis, and
reporting.**

Through the lightweight, easy-to-manage interface of modern web design, Carlson Command is a monitoring and data management software solution that transmits data from the machines to Carlson Command and from Carlson Command to the machines, increasing both safety, productivity, and reporting capabilities.

On both large and small job-sites, managers can see and monitor multiple or single machines in multiple views, including plan view, from any remote location with an internet connection. Machine positions can be viewed, cut/fill and elevation monitored in real time, and managers can remote into the machine and send messages. For sites without remote connectivity, data can be stored in the machine and copied to a thumb drive for post analysis.

Developed exclusively by Carlson Software, this product benefits from years of experience working with the managing needs of mining and landfill operations.

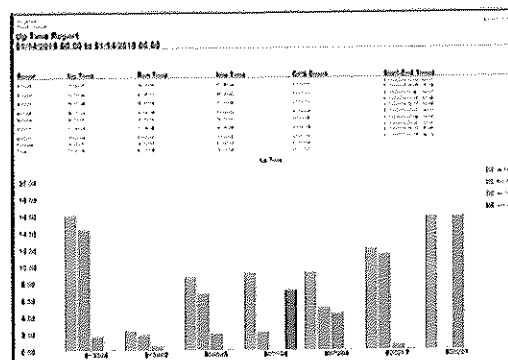


Learn more: www.carlsonmachinecontrol.com
or contact at: info@carlsonmachinecontrol.com

BREAK NEW GROUND

Top New Features

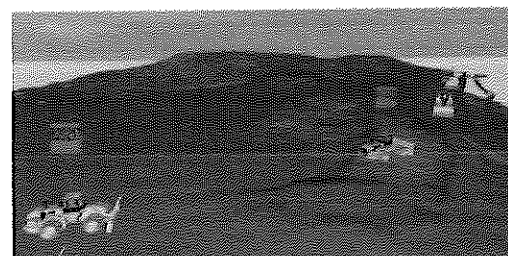
- The new Stream Server and Carlson Command Web uses modern, powerful protocols for machine connection and data transfer and enables light weight user install
- Send projects, installs, files and configurations to a single machine or your whole fleet with confidence
- Improved data input and real-time transfer means knowing the data is up-to-date and accurate
- New required task feature ensures operators are logging their time accurately
- New ability to manage, view, and create custom reports of multiple As-Built surfaces within the site linework



Uptime report

Powerful Management & Reporting

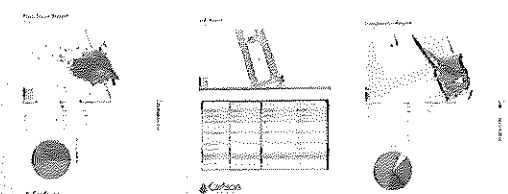
- Individual Machine Volume Metrics
- Dozer Push Metrics
- Time Reporting
- Drill Reporting
- Productivity Analysis
- Surface Color Mapping
- Cut/Fill Color Mapping
- Rover Position Trace
- Historical Replay



Dozers

User-Friendly Web Interface

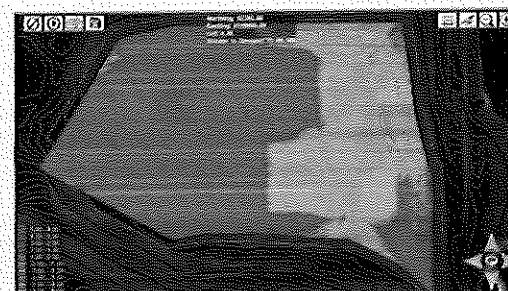
- Quick, Easy Report Customization
- Cloud Data Management
- Management of Multiple Sites
- Scheduled Reporting with Automatic Emails
- Comfortable, Clear Interface



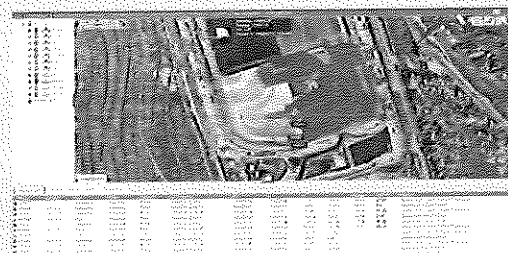
Reports - Pass report, AUF report and Comp report

Dynamic Productivity Tools

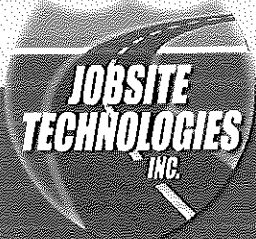
- On-the-move data exchange (machine to machine)
- Surface updating
- In-cab monitoring
- Tasks & delays/down-codes
- On-site proximity warnings
- Avoidance zones, and more



Cut - Fill color map



Full screen of Carlson Command

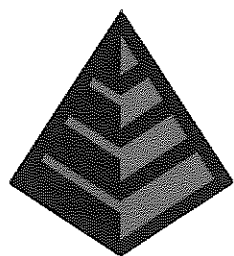


Jobsite Technologies Inc.

611 Hwy. 74 South, Suite 101, Peachtree City, GA 30269

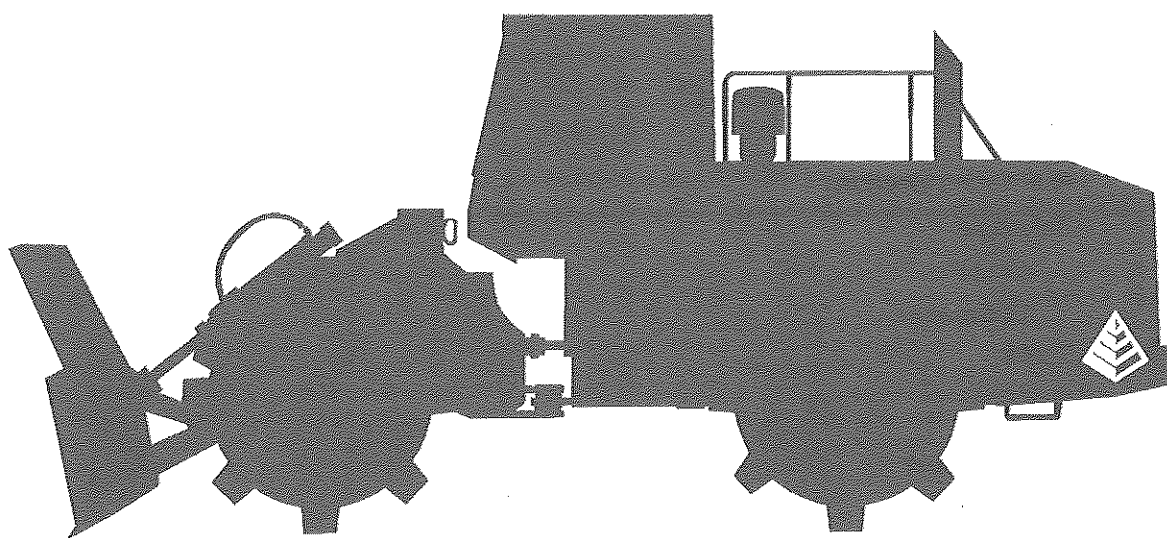
Corporate Office: 678-633-8155

www.jobsitetechnologies.com



Carlson

MACHINE CONTROL



Landfill Command User Guide

www.carlsonsw.com/machinecontrol

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Table of Contents

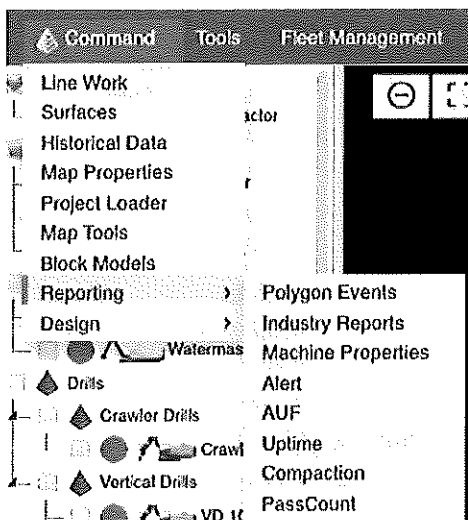
Table of Contents	1
Introduction	2
Command Landfill Navigation	2
AUF Report	2
Overview	2
PDF	4
AUF Settings	5
Work Zone Settings	6
Limit Rovers	6
Color Settings	6
Output	7
AUF Cross Section	9
Schedule	11
Email	11
Database	12
Scale	13
XLS Only	13
Compaction Report	14
Settings	14
Plan View Screen	15
PDF	16
Passcount Report	17
Settings	17
Output	18
Plan View Screen	18
PDF	19
Still have questions? We're always here to help.	20

Introduction

Carlson Command for Landfill Operations is the “back office” database software used to compile real-time data to monitor the productivity and efficiency of landfill operations. Within this manual are references for landfill specific operations such as: creating reports for density (AUF), Compaction by Deflection, and Passcounts. Refer to the Carlson Command Reference Manual 2021 for details on general operations.

Command Landfill Navigation

Accessing the primary Landfill functions in Command, select the *Command* Tab, then click *Reporting*.



AUF Report

Overview

AUF (Airspace Utilization Factor/Landfill only) - The AUF report is the primary report for measuring the efficiency of landfill operations. The report's primary value comes from providing the volume of airspace occupied by as-placed waste.

- **Total Fill (CY/CM)** - Total fill is the volume of airspace filled over the selected time period
- **Total Area (sqFt/M)** - Total area is the Area of the work zone, or working face.
- **Cover Volume (CY/CM)** - The volume of cover material needed to cover the working face at the depth specified
- **Avg Fill Depth (Ft/M)** - Average depth of waste over the working face
- **Max Fill Depth (Ft/M)** - The largest depth of fill placed over the working face

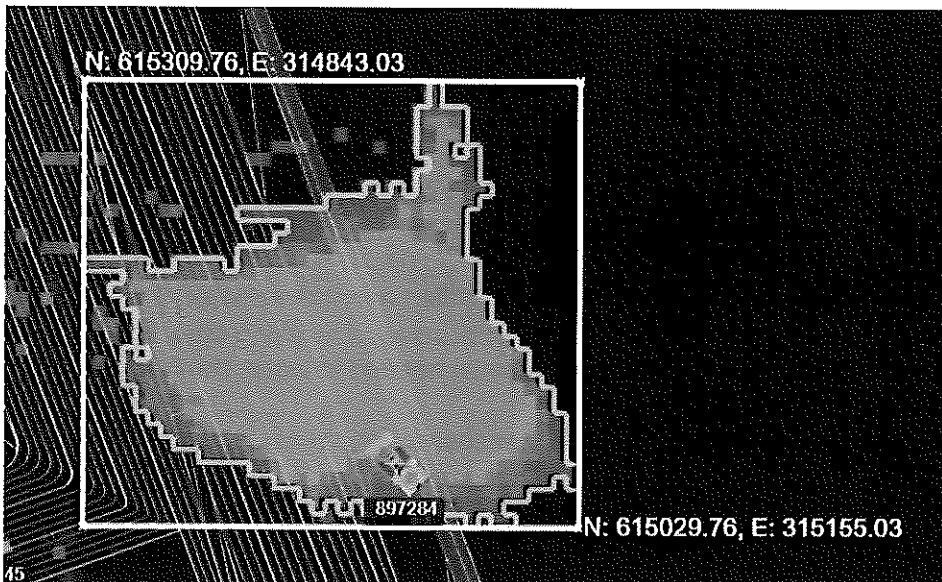
Updated 2021/02/07

- **Weight (T/MT)** - The weight brought over the scales over the selected time period (user input)
- **AUF (T/CY - MT/CM)** - Metric usually displayed as a % of Tons per cubic yard or cubic meters
- **Density (lb/CY)** - Metric of density displayed as pounds per cubic yard
- **Density (lb/Cft)** - Metric of density displayed as pounds per cubic foot.
- **Upper Left (N,E)/Bottom Right (N,E)** - The northing and easting of the corners of the limits of the AUF area.

Configure the settings for the AUF and press submit. A new tab titled **AUFTotal** will open in the details panel at the bottom of the page. Each work zone will be differentiated by Work Zone # and auto generated color. Work Zones will not display an individual density unless waste tonnages are separated and tracked.

General Info Transfer Queue Alerts Schedule AUFTotal 			
Work Zones	Work Zone 1	Work Zone 2	Work Zone Total
Total Volume(ICY)	12970.85	4689.65	17660.49
Total Area(ISqFt)	67472.00	27536.00	95008.00
Cover Volume(ICY)	1249.48	509.93	1759.41
Avg Fill Depth(IFt)	5.19	4.60	5.02
Max Fill Depth(IFt)	15.51	12.33	15.51
Weight(ton)			15987.00
AUF(ton/ICY)			0.91
Density(lb/ICY)			1810.48
Upper Left (N, E)	617408.75, 313547.45	615788.75, 313855.45	617408.75, 313547.45
Bottom Right (N, E)	616948.75, 314075.45	615580.75, 314111.45	615580.75, 314111.45

The following display will be shown for the AUF that is created. This image would correlate with Work Zone 2, because the bounding perimeter matches the color of the Work Zone in the AUF table.



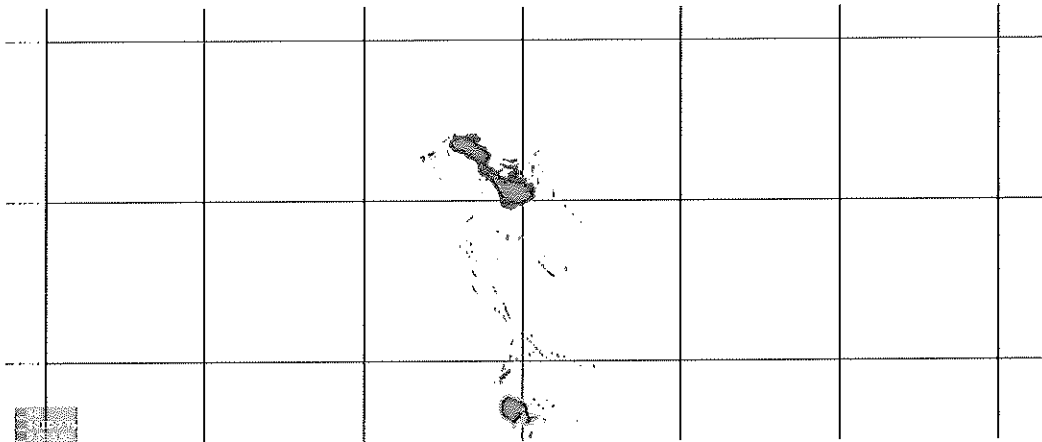
Updated 2021/02/07

PDF

Press the "PDF" button at the top of the tab to download the report as a PDF file. A screen capture will be taken of the map and the added to the table in the PDF.

Scheduled Report
2021-02-07 13:40:41

AUF Report 2021-02-07 08 33
01/25/2021 00:00 - 01/26/2021 00:00



Work Zones	Work Zone 1	Work Zone 2	Work Zone Total
Total Volume(ICY)	12970.85	4689.65	17660.49
Total Area(ISqFt)	67472.00	27536.00	95008.00
Cover Volume(ICY)	1249.48	509.93	1759.41
Avg Fill Depth(IFt)	5.19	4.60	5.02
Max Fill Depth(IFt)	15.51	12.33	15.51
Weight(ton)			15987.00
AUF(ton/ICY)			0.91
Density(lb/ICY)			1810.48
Upper Left (N, E)	617408.75, 313547.45	615788.75, 313855.45	617408.75, 313547.45
Bottom Right (N, E)	616948.75, 314075.45	615580.75, 314111.45	615580.75, 314111.45

Updated 2021/02/07

AUF Settings

Start Date/End Date – Beginning and ending date/time of the report you would like to run.

Base Grids – If Protocols is running on multiple grids select the one to use for this report. In most cases a landfill will only have one base grid.

Total Weight – This is the weight in Tons that has come across the scales during the time of the report. If tonnages are entered into Command Scales on a regular basis, this number will total for the days the AUF is set to report.

Cover Needed - Depth of cover material required to cover the working face. This will calculate the volume of material needed to cover the working face over the time of the report. This volume will not be a factor in the density calculation.

Daily Breakdown - Selecting this option will break the results down daily so you get a volume and area for each day during the period selected.

AUF Report

+ AUF Settings
?

Start Date:
01/14/2019 00:00

End Date:
01/15/2019 23:59

Base Grids:
asdf.bgrd ▼

Total Weight:

35023
Tons

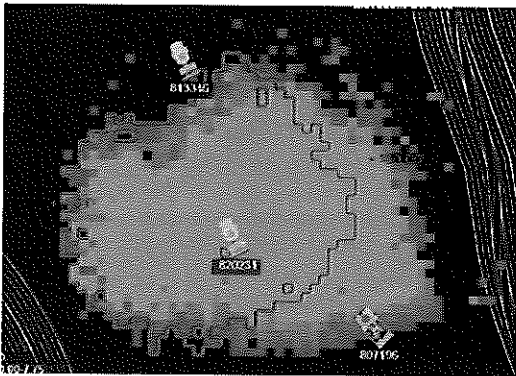
Cover Needed:

.5
Feet

Daily Breakdown:
☐

Average Daily Area:
☐

Spread Sheet Download:
☐



Click on the tab for the day to see the individual day breakdown in the chart and in the outline on screen.

Tabs for each day will be available, as well as a tab for the Total over the time period.

General Info	Transfer Queue	Alerts	Dashboard	AUF1/14/2019, 11:59:00 PM	AUF1/15/2019, 11:59:00 PM	AUFTotal
Work Zones	Work Zone 1	Work Zone 2	Work Zone Total	1/15/2019, 11:59:00 PM Total		
Total Volume(tCY)	10491.70	7204.51	17696.21	19318.59	37078.69	
Total Area(SqFt)	45184.00	32448.00	77632.00	76288.00	111040.00	
Cover Volume(tCY)	836.74	600.89	1437.63	1412.74	2056.30	
Avg Fill Depth(ft)	6.27	5.99	6.15	6.84	9.02	
Max Fill Depth(ft)	18.52	13.35	18.52	21.35	25.20	
Weight(ton)			1000.00	N/A	N/A	
AUF(ton/cy)			0.06	N/A	N/A	
Density(lb/cy)			113.02	N/A	N/A	
Upper Left(N, E)	616757.76, 313739.03	615309.76, 314867.03	616757.76, 313739.03	616773.76, 313835.03	616757.76, 313739.03	
Bottom Right(N, E)	616485.76, 314003.03	615053.76, 315147.03	615053.76, 315147.03	615029.76, 315155.03	615029.76, 315155.03	

Average Daily Area - Selecting this will add a metric for the average area of work for each day in the selected period.

Optimizations

Average Daily Area

127504.00

AUFTotal



Spreadsheet Download - Will replace the PDF download buttons on the tabs with XLS download buttons.

Work Zone Settings

Work zones are calculated based on parameters set here. These settings define the area of work over the time period. This estimates the area of the working face and the cover needed. These parameters filter out any changes to the surface that do not reflect placed waste.

Bounding Boxes - Will show a box from the Min and max coordinates of the work zone. This box will be output on the PDF download also.

Min Fill Depth – The minimum amount of fill depth that will be counted as part of the work zone.

Min fill Area – The smallest area that will be counted as art of the work zone.

– WorkZone Settings

Bounding Boxes:



Min Fill Depth:

1

Min Fill Area:

3000

Limit Rovers

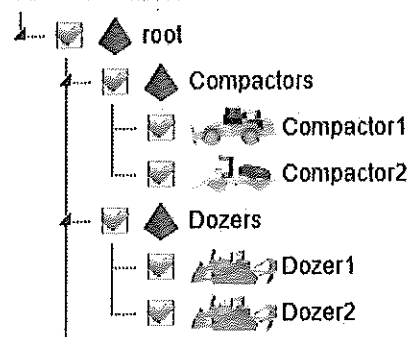
Select machines to include in the report. If any machines are checked, only those machines will be used in the calculations. With nothing selected, all machines will be used.

Color Settings

Max Color Value – The maximum depth of fill in ft/meters that the colors represent.

Steps – The number of colors in the gradient representing total fill.

– Limit Rovers



Updated 2021/02/07

Output

Output

Submit

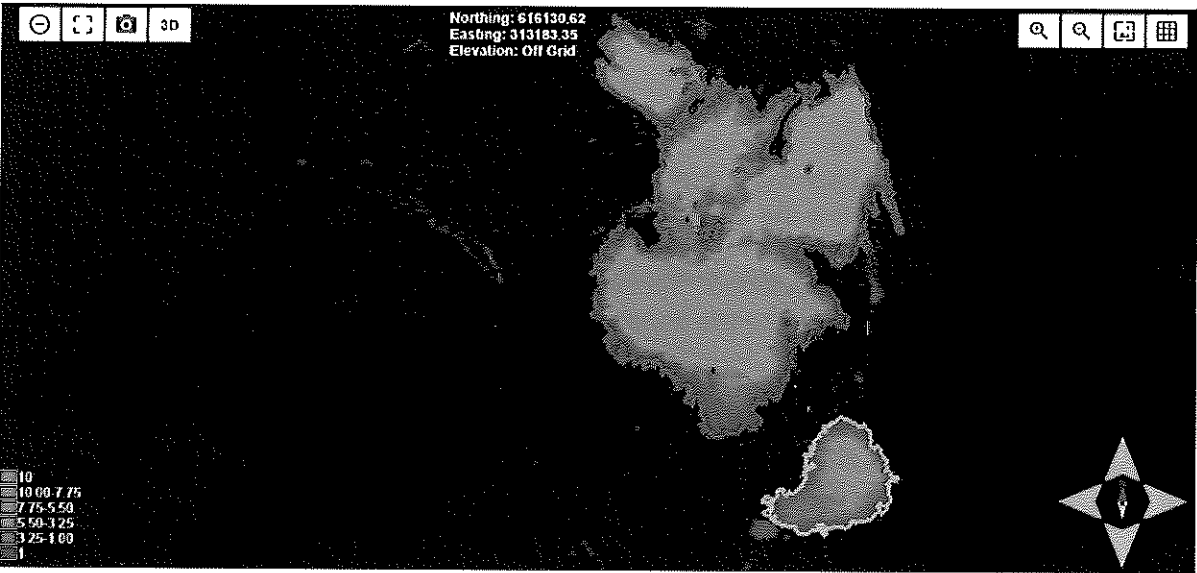
Schedule

Scale

XLS Only

Press *Submit* to run the report. This may take a moment to complete all calculations.

Work Zones will be represented in the plan view with the colors set for showing total fill in the AUF configuration and will be outlined with different colors so they can be distinguished from each other.

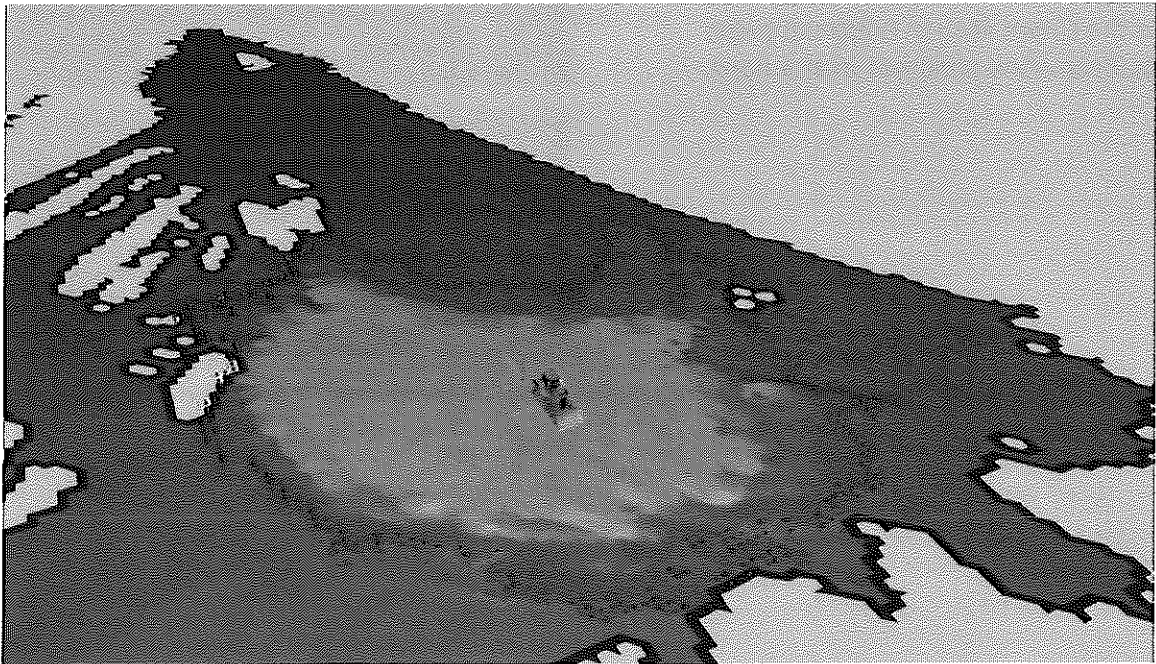


The calculations are loaded into a table in the **details** panel at the bottom. The colors will correspond with the work zone number. Each Work zone will show total volume, total area, cover volume, average fill depth and max fill depth. The Total on the far right will show the totals for those metrics as well as the density for the entire time period.

General Info	Transfer Queue	Alerts	Schedule	AUFTotal	
Work Zones	Work Zone 1	Work Zone 2	Work Zone Total		
Total Volume(ICY)	26182.64	7369.75	33552.39		
Total Area(ISqFt)	92176.00	35264.00	127440.00		
Cover Volume(ICY)	1706.96	653.04	2360.00		
Avg Fill Depth(IFt)	7.67	5.64	7.11		
Max Fill Depth(IFt)	23.27	15.37	23.27		
Weight(ton)			15987.00		
AUF(ton/ICY)			0.48		
Density(lb/ICY)			952.96		
Upper Left (N, E)	617408.75, 313547.45	615844.75, 313827.45	617408.75, 313547.45		
Bottom Right (N, E)	616924.75, 314091.45	615580.75, 314079.45	615580.75, 314091.45		



Press the **3D** button to view the surface with the outlined fill in the 3D mode.

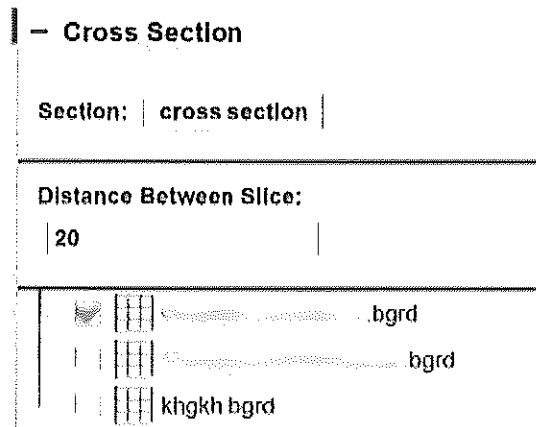


AUF Cross Section

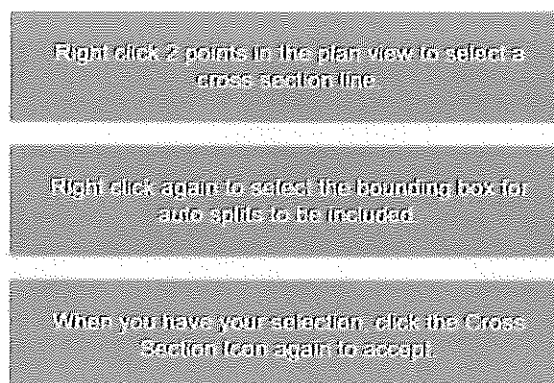
Description:

This feature shows cross sections at regular intervals of the as-built surface compared to a design. The new section is titled “Cross Section” in the AUF Report menu.

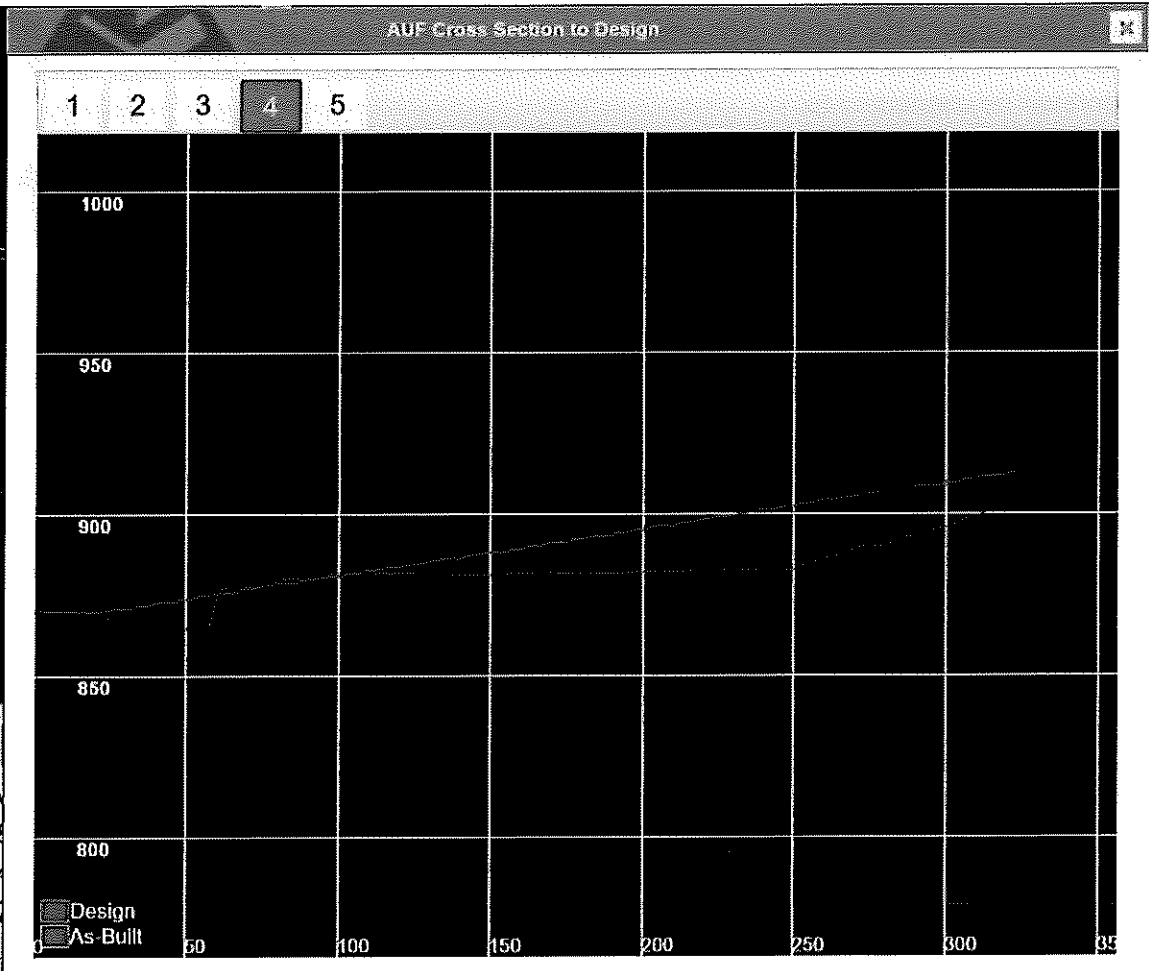
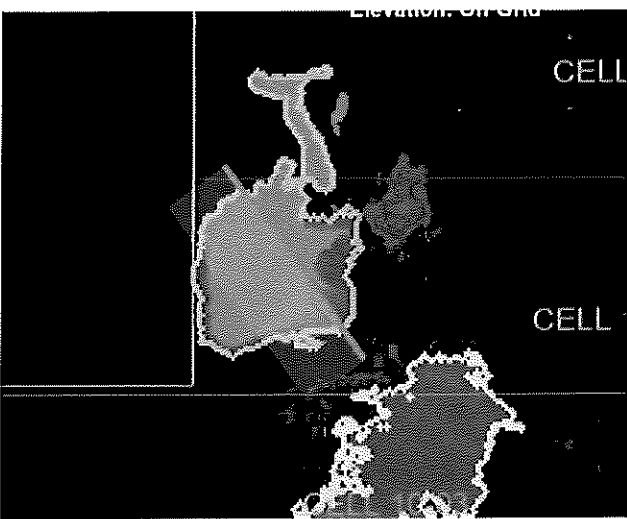
Distance Between Slice is distance between the cross section views to be created. Select a design in the tree below for the comparison.



Press the Cross section button to begin setup. Follow the onscreen instructions.



Right-click to select a line across the fill section. An area will be highlighted over the area to be cross sectioned. Right-click again to confirm. Then press the “Cross Section” button again - dialog box will appear with the cross sections.



Schedule

You can schedule an AUF report to be run for a predetermined length of time.

Press “Schedule” In the controls panel to open the AUF scheduling menu.

Email

Schedule AUF reports to automatically run for a period of time and be emailed to Command users.

Select from Daily, Weekly, or Monthly breakdown.

Set the Start and End Date/Time, then select the Output Day/Date and Time. The Output will be the week following the last report date.

Select the users to have the report emailed to. Users need to be configured in **Users** prior to scheduling an AUF. Ensure a checkbox is checked next to the name the report will be distributed to.



Email

Database

Monday

00:00

End:

Sunday

23:59

Output:

Monday

8:00

Frequency

Daily

Weekly

Monthly

Schedule

Current Schedule

Name	Frequency	Base Grid	Live Work	Min Fill	Min Area	Cover
------	-----------	-----------	-----------	----------	----------	-------

Users to Email:

☐ Edwin, Gogzhayan

☒ Jaka, Sicklea

☒ Jones, Tim

☐ Petrov, Karl

☒ Weber, Joshua

☐ Weber, Joshua

☐ White, Walter

AUF Report

AUF Report 2021-02-05 10:30

Report Name:

AUF Report 2021-02-05 10:30

AUF

Start Date:

2021/01/24 00:00:00

End Date:

undefined

Base Grids:

Total Weight

0

Tons

Cover Needed:

0.5

Feet

Daily Breakdown:

☐

Average Daily Area:

☐

XLS Download:

☐

WorkZone

Bounding Boxes:

☒

Min Fill Depth:

1

Min Fill Area:

3000

+ Rovers

+ Color

+ Cross Section

Click **OK** to accept the report and exit the menu, or **Apply** to accept the report and keep the menu open to schedule a different time breakdown.

Select a report in the **Current Schedule** table to edit the parameters of the report.

Once the AUF Report is scheduled, it will appear in the Current Schedule window, below the AUF report parameters. You can also see this by selecting the *Schedule* button in the Task window on the home page.

Name	Frequency	Base Grid	Line Work	Min Fill	Min Area	Cover
AUF Report 2021-02-05 10 30	Weekly	null		1	3000	0.5

Schedule Report in Task Window on the home page.

General Info		Transfer Queue	Alerts	Haul Status	Schedule
Type	Name	Recipients	Frequency	Send Time	Last Run
 Pile	Pile Report 2021-02-02 01:26	Jones Tim, Edwin Gogzhayan, White Walter, Petrow Karl, Jake Sickels, Weber Joshua, Weber Joshua	daily	05:00:00	2021-Feb-07 10:00
 Haul	AUF Report 2021-02-05 10:30	Jones Tim, Jake Sickels, Weber Joshua	Weekly	Monday @ 07:00:00	Not Sent

Database

The database schedule is for storing periodic AUF data in the database for future analysis.

AUF Report	
Env? Database	Report Name: AUF Report 2021-02-07 09:05
Database AUF Settings	Current Schedule
Start Date: 10-01-2020 00:00	+ AUF
Cover Needed: 5	+ WorkZone
Min Fill Depth: 1	+ Rovers
Min Fill Area: 3000	+ Color
Base Grid: ▼	+ Cross Section
* Limit Rovers	
Apply	Data

Configure the database AUF settings like the regular AUF. Press “Apply” to save the parameters. This will create a schedule to run AUF reports daily and store the results in the database. This data can be used in the future to report on trends and analyse productivity.

Scale

Daily scale weights can be stored in the system by entering a weight for each day or by importing a .csv file. The .csv file should be in the format: [date],[weight]

Once weights are entered, select *Apply* to save the data.

The screenshot shows a web application window titled "AUF Report". At the top, there is a "Date Picker" set to "02/05/2021" and a "Date Format must be: mm/dd/yyyy" label. To the right of these are two buttons: "CSV" and "Apply". Below this is a section titled "Current Scale Weights" which contains a table with two columns: "Date" and "Weight". The table lists dates from 02/05/2021 down to 01/24/2021. The "Weight" column contains numerical values for the first four dates and is empty for the subsequent dates.

Date	Weight
02/05/2021	1943.34
02/04/2021	3492.32
02/03/2021	2185.56
02/02/2021	1899.45
02/01/2021	
01/31/2021	
01/30/2021	
01/29/2021	
01/28/2021	
01/27/2021	
01/26/2021	
01/25/2021	
01/24/2021	

XLS Only

Downloads a spreadsheet version of the report without any screen output.

Compaction Report

The Compaction report shows the deflection of the surface from one pass to the next. This report mirrors the Compaction view in *CarlsonGrade*™. The intent is to show if the existing surface is continuing to compact, or has reached maximum compaction.

Settings

Dates - Start and End dates of report.

Base Grid - Base Protocols grid to run over. Option to make NULL grid using extents of tracks.

Color Settings- Define the report breakdown and map colors based on settings. These values act as triggers starting at 0. The Default colors show the surface as green ("good") when the surface does not change within the -.3 ft to .4 ft bands, and red ("bad") if the surface deflects by 0.6ft or more. The surface is colored blue if 0.5 ft of fill is placed since the last pass. This indicates more material has been placed and the process needs to be repeated.

Rovers- Limit what machines are used in the calculations. Default is all rovers selected.

Compaction Report

- Dates

Start Date:	01/14/2019 00:00
End Date:	01/15/2019 23:59

Base Grids: asdf ▾

- Color Settings

Color Pallet	ADD
---------------------	------------

	--	-0.6	
	--	-0.5	
	--	-0.4	
	--	-0.3	
	--	0	
	--	0.4	
	--	0.5	

- Rovers:

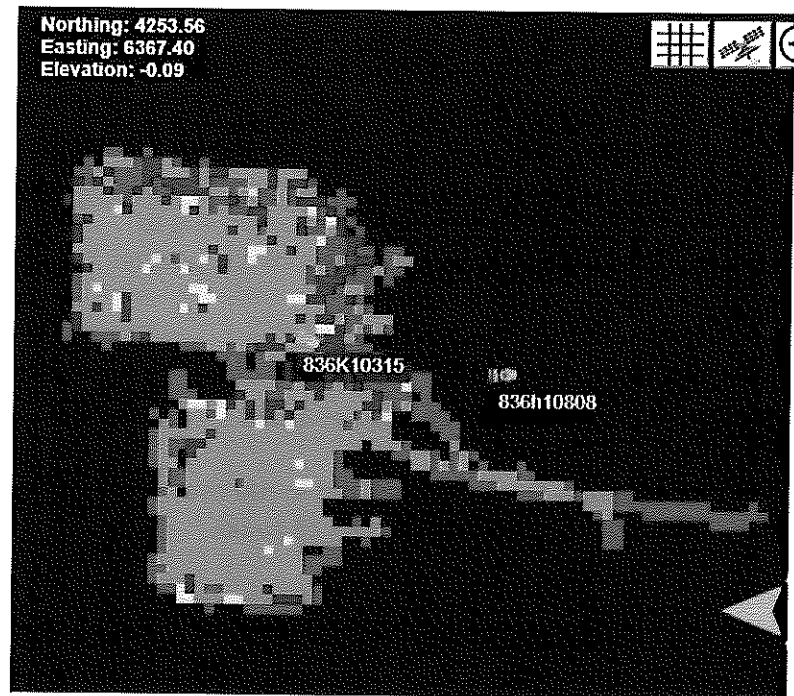
root

- Fairless
 - 813346
 - 813420
 - 813421
 - 813445
 - 813462
 - 820217

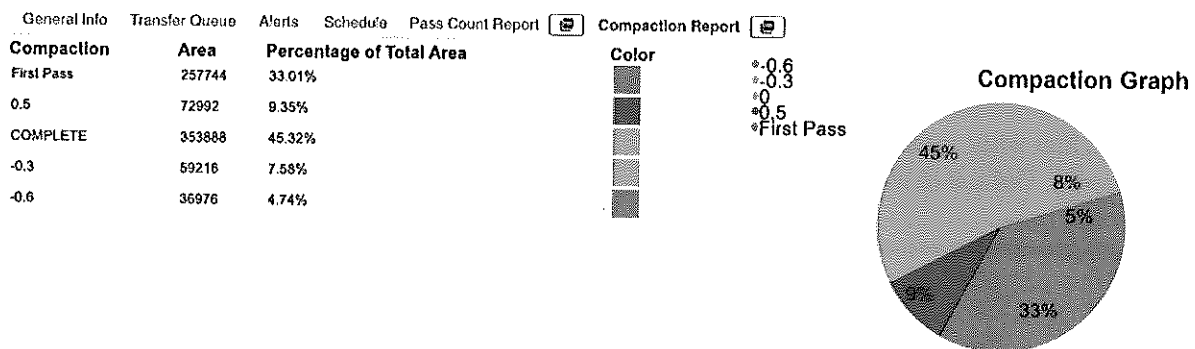
Updated 2021/02/07

Plan View Screen

The report displays a color coded map and tabled breakdown of data. Similar to Grade, values are starting at zero and total away from zero until they reach the next trigger value.

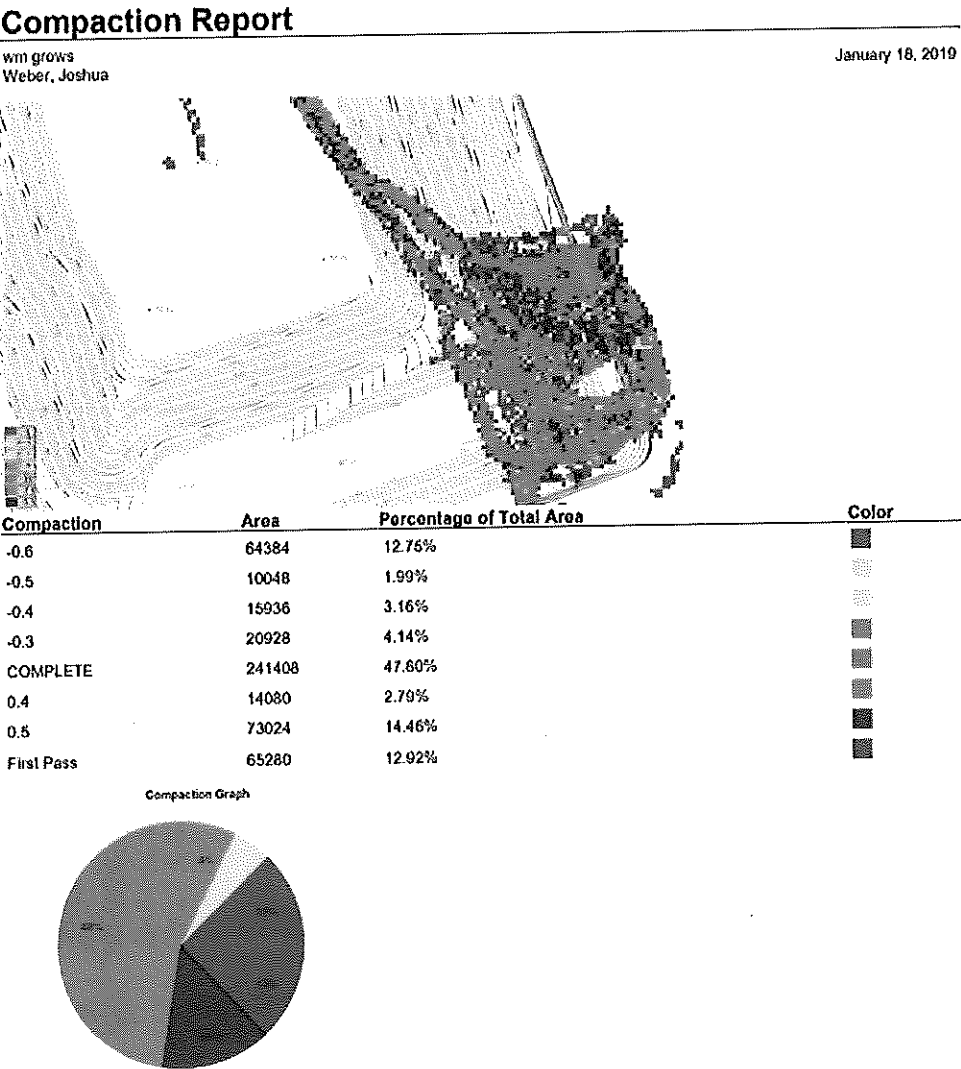


The chart will appear in a tab in the Details panel at the bottom of the screen.



PDF

Press the PDF button to download a PDF of the report. Command will take a screen capture of what is in the map view at the time the PDF button is pressed. This capture will be used as the image at the top of the PDF report. The chart and the graph will be shown below.



Passcount Report

The Passcount report allows the user to see how many times the machines have passed over different areas of the site.

Note: Each movement forward, or back counts as one pass.

Settings

Base Grids – If Protocols is running on multiple grids you can select the one you would like to use for this report.

Start Date/End Date – Beginning and ending date/time of the report you would like to run.

- **Min Passes** - The lowest number of passes that will register on the report
- **Max Passes** - The highest number of passes that will be calculated in the
- **Steps** - The number of colors in the speed map.
- **Min Fill** - This is the minimum amount of fill for the area that will be considered for the report.
- **Lift Height** - The height to divide the total height by to get passes per lift.
 - d = depth of fill
 - tp = total passes
 - lh = Lift height
 - For each grid node $= tp/d*lh$
 - Then the % of the area covered during that time period that falls into each defined grouping will be represented in the output.

Rovers - This menu allows the user to select which machines will be included in the report. All are selected by default. Click the check boxes to select/deselect machines in the tree.

Color Settings - Select the colors desired for each level of passes The levels are determined by the settings **Max Passes** and **Steps**. Default is a gradient from blue to green.

Base Grids:	asdf ▼
— Dates	
Start Date:	12/20/2018 00:00
End Date:	12/20/2018 23:59

— Settings	
Min Passes:	1
Max Passes:	10
Steps:	6
Min Fill:	1
Lift Height:	1

— Rovers	
☒	root
☒	813346
☒	813420
☒	813421

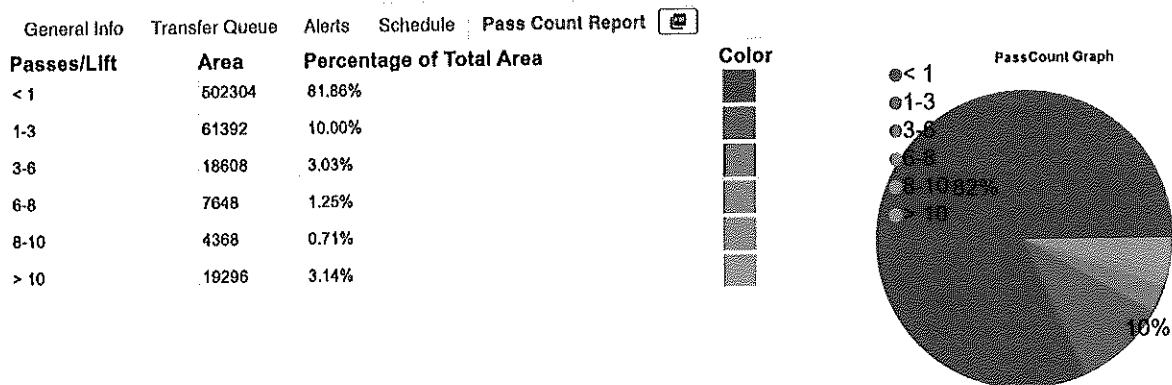
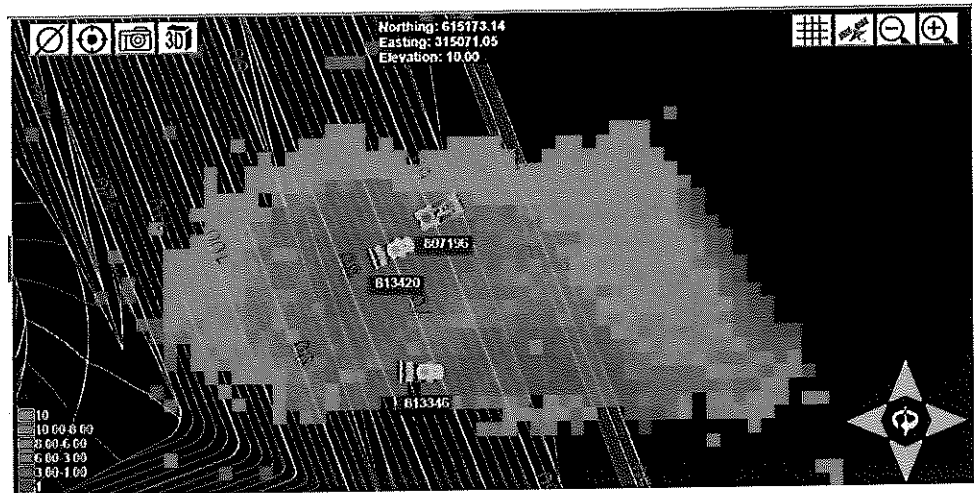
— Color Settings	
	10
	10.00 - 8.00
	8.00 - 6.00
	6.00 - 3.00
	3.00 - 1.00
	1

Updated 2021/02/07

Output

Plan View Screen

Pressing **Submit** will output a color map in the map view and report data in the details panel on a new tab at the bottom of the screen.



Passes/Lift - This is the number of passes broken down into how much of the area was passed over this many times.

Area - The total area that has been passed over this many times.

Percentage of Total Area - How much of the area that has been passed over this many times.

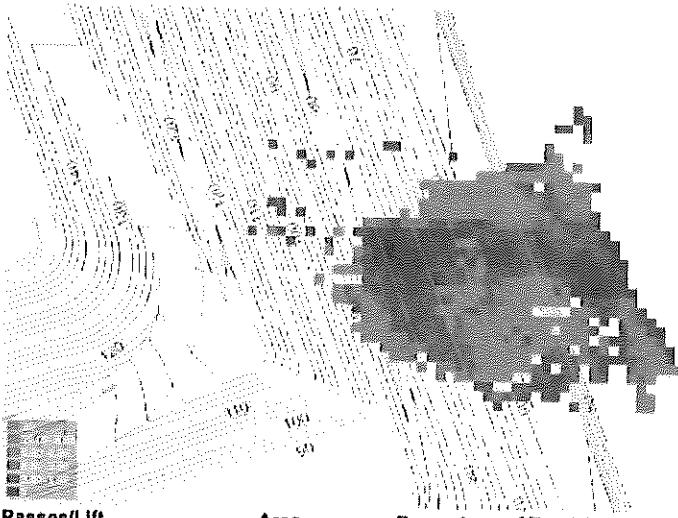
PDF

Pressing the **PDF** button on the tab will download the report in PDF format. Command will take a screen capture of what is in the map view at the time the PDF button is pressed. This capture will be used as the image at the top of the PDF report. The chart and the graph will be shown below

Pass Count Report

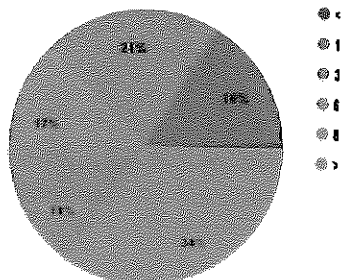
wn grows
Weber, Joshua

January 17, 2019



Passes/Lift	Area	Percentage of Total Area	Color
< 1	898	0.82%	
1-3	17024	15.66%	
3-6	23040	21.19%	
6-8	18304	16.83%	
8-10	12160	11.18%	
> 10	37312	34.31%	

PassCount Graph



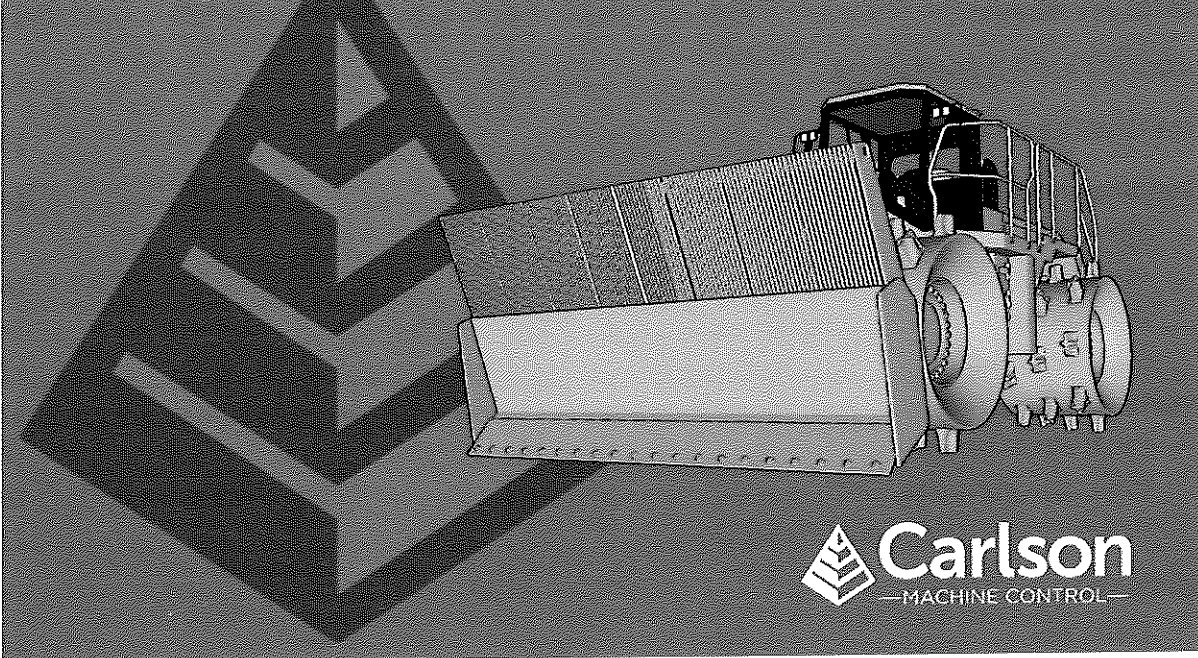
Still have questions? We're always here to help.

Carlson Machine Control
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Maysville, KY 41056
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800-989-5028 (Support)
606-564-5028 (p)
606-564-6422 (f)
mcsupport@carlsonsw.com

END

Updated 2021/02/07

Landfill Grade™



LandfillGrade™

Reference Manual v.8.0

www.carlsonsw.com

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TABLE OF CONTENTS

TECHNICAL SUPPORT	7
End-User License Agreement	8
Using the Manual	11
ABOUT LANDFILLGRADE™	12
HARDWARE COMPONENTS	13
Loading and Registering LandfillGrade™	14
Choose Components	15
Install Location	16
Data Location	16
Start Menu Folder	17
OpenVPN Options	17
Installation Options	18
Product Registration	19
Getting Started with LandfillGrade™	21
OPERATOR INTERFACE	21
Plan View	23
Profile/Cross Section Views	23
Cut/Fill	24
Starting and Exiting LandfillGrade™	24
Activities, Delays and Down Codes	25
Tools Menu	27
Store Points	28
Settings	28
Data	30
Storing Points	31
Stakeout	32
Setup Guideline	34
Create Flat Pad	35
Create Slope	36
Creating a new Slope	37
Enter Coordinates	37

Add Cover	41
Work Face	42
Configure Vehicle	44
Vehicle	44
Configure Compactor	44
Geometry	44
Primary Offsets	44
Heading Offset	45
Chassis Dimensions	45
Blade Dimensions	46
Compactor Setup	46
Settings	47
Cross hair Options	47
Vehicle Settings	47
Icon Settings	48
Sensors Settings	48
Heading Settings	52
Output Settings	52
Configure Rover	55
Instrument	55
Instrument Selection	55
Communication	55
Backup	55
Settings	56
Quality	57
Dynamics	57
Operations	57
RTK	58
Radio	58
TCP/IP Direct UDP/IP Direct	60
NTRIP	61
Configure Projects	62
Change Project	62
New Project	62
Project Files	63
Plan View File:	63

Design Surface	64
Existing Surface	66
Warning/Other Surfaces	68
Project Options	68
Coordinate System	68
Localization Editor	70
Edit Project	71
Options	72
Surface Options	72
Cut Fill Options	73
Painting Options	75
Pass Count Options	76
Compaction Options	76
Surface Update Options	77
Display Options	77
Setup Grade Views	78
Text Display Options	78
Reverse Video	79
Advanced Display Options	80
Toolbar Display Options	81
Set Custom Display Colors	81
Vehicle History Options	82
Status Bar Setup	83
Navigate Options	83
Project Options:	84
Report Options:	84
System Options	84
Communication Options	84
Heartbeat Settings (deprecated)	85
Streaming Settings	86
M2M Settings	87
Logging Tolerances	87
Show Other Rovers	88
Store Point At	88
Sync Surface Every	88
Admin Password	88

LandfillGrade™ Reference Manual

User Password	88
Prompt for Start Point	88
Password on Shutdown	89
Allow Ignition Shutdown	89
Advanced System Options	89
Change Project	90
File Utilities	90
Calculations	91
Export Points To PDF	92
Create TIN from Points	92
Edit Coordinates	92
Export to Grid	92
Export to Null Grid	92
Create Points from Line	93
Create Line from Points	93
Inverse Between Two Points	93
Restore Settings	93
Show Monitor Screen	94
GPS	94
Raw Position Info	94
Local Position Info	94
Status Info	94
Skyplot	95
Vehicle	96
Position Info	96
Status Info	96
Communication	96
Streaming Status	96
Heartbeat Status	97
M2M Positions	97
M2M Network Nodes	98
About LandfillGrade™	98
Support	99
Product License	99
Activate License	100
TROUBLESHOOTING	101

LandfillGrade™ Reference Manual

Maintenance	104
LandfillGrade™ and GPS Troubleshooting Guide:	105
GPS Lost Lock:	105
Status Bar Reference Guide	106
Computer Problems	107
Appendix A – Simulation Keys	108
Appendix B – Hardware	109
Computer Data: Carlson Control Box	109
Heading Receiver Data – Carlson MC Pro Vx6	110
Mechanical	110
GNSS Receiver	110
Antenna	110
Power	110
Appendix C – Supported Hardware	111
Appendix D – Online Resources	112

LandfillGrade™

TECHNICAL SUPPORT

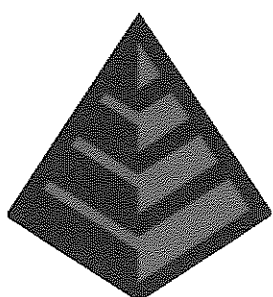
Technical support for LandfillGrade™ is provided by your local Carlson Machine Control dealer.
Please contact your local dealer before contacting Carlson Machine Control.

Carlson Machine Control Dealer Name: _____

Carlson Machine Control Dealer Number: _____

To report a bug or make a feature request, please email mcsupport@carlsonsw.com

Carlson Software, Inc. Corporate Headquarters Maysville, KY, USA Tel (606) 564-5028 Fax
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Carlson

—MACHINE CONTROL—

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Using the Manual

The manual begins with an overview of the software and hardware, then typical workflow. The following sections are designed as a reference guide, containing a complete description of all commands and information provided in the Carlson LandfillGrade™ product. The chapters are organized by program menus, and are arranged in the order the menus typically appear in Carlson LandfillGrade™.

ABOUT LANDFILLGRADE™

LandfillGrade™ is a Carlson Machine Control product that has been developed for the solid waste landfill market. It has many features to help extend the life of a landfill. The system consists of on-machine hardware, software, and office software component for data collection and analysis. The system utilizes GNSS technology and other sensors to provide information to Carlson's control box that houses Carlson LandfillGrade™ software. This powerful software component compiles all the sensor data to provide the operator with intuitive real-time views to aid in daily tasks.

With Carlson Command and Carlson ProTools back office products, LandfillGrade can monitor metrics such as Real-time movement of the machines, volumes of waste, density, downtime of machines, and current cut/fill values.



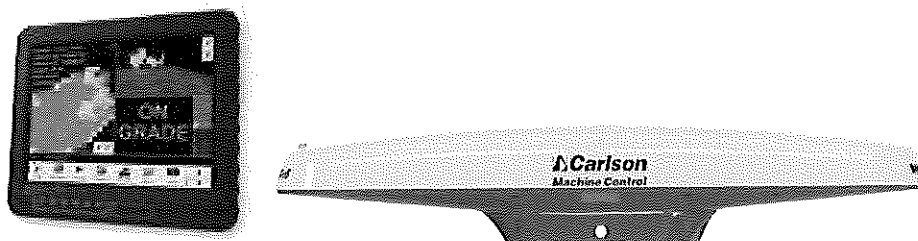
HARDWARE COMPONENTS

Necessary Components & Overview:

LandfillGrade™ requires a minimum of 4 hardware components: base and rover GNSS with associated antenna, radios at the base and rover to transmit the GNSS corrections (or optional VRS or Reference Station network connection), slope sensors and onboard touch-screen computer to receive GNSS positions (through serial or CAN port) and run LandfillGrade software. Available options:

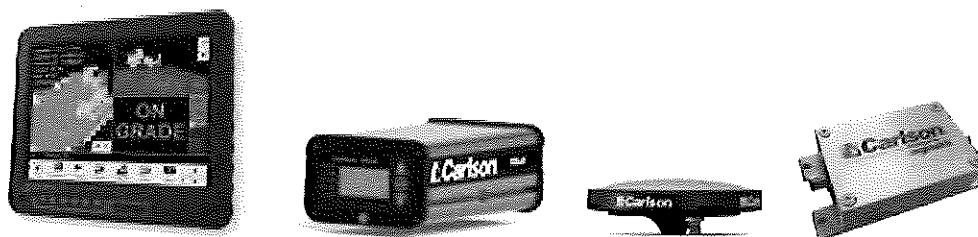
Option A:

- Carlson MC-8/10
- Carlson Vx6 GNSS receiver and dual antenna (with a built in slope sensor and UHF radio)



Option B:

- Carlson MC-8/10
- Carlson VSx6 GNSS Receiver
- Carlson RA45 Ruggedized GNSS Machine Control Antenna
- Carlson MGBTech Slope Sensor



LandfillGrade™ is installed by an exclusive Carlson Machine Control dealer network. Carlson Software recommends "kits" containing the software, computer, and ruggedized housing containing the GNSS and radio.

A Carlson Machine Control technician or Carlson Certified Dealers is recommended for installation of hardware to ensure proper quality and calibration .



Loading and Registering LandfillGrade™

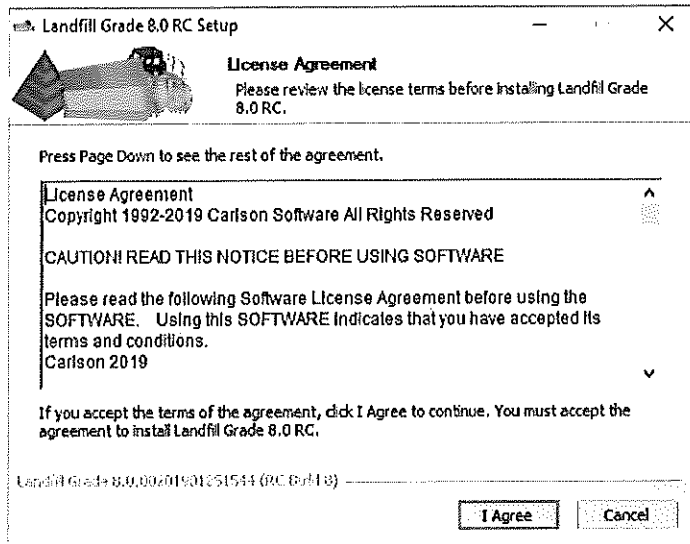
LandfillGrade™ is installed using an USB thumb drive to a ruggedized field computer. Contact your Carlson representative to find the latest version. Additionally, LandfillGrade™ can be installed to an office PC.

Current versions of Grade products can be found at:

<ftp://ftp.carlsonmachinecontrol.com/files/Software/Grade/>

License Agreement

Read and agree to the the license agreement. Click "I Agree" to continue.

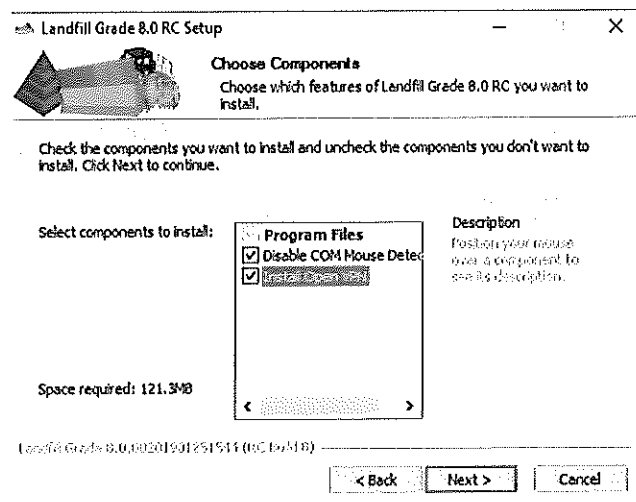


Choose Components

Choose which optional components to install with LandfillGrade.

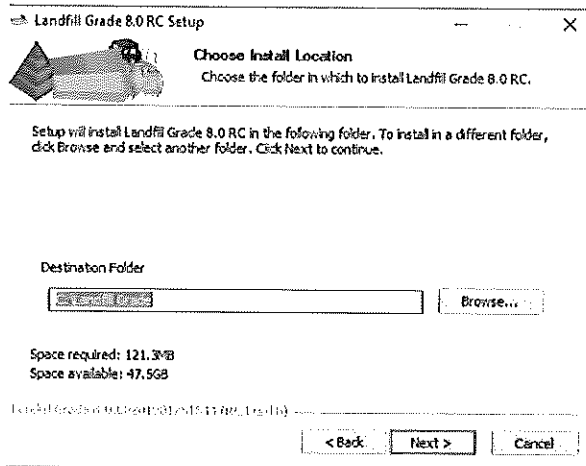
Disable COM Mouse Detection - Prevent Windows from searching for mouse on the COM ports. This can interfere with Carlson Grade while initializing ports used with hardware.

Install OpenVPN - Installs OpenVPN Client for use with **Carlson Command Cloud**.



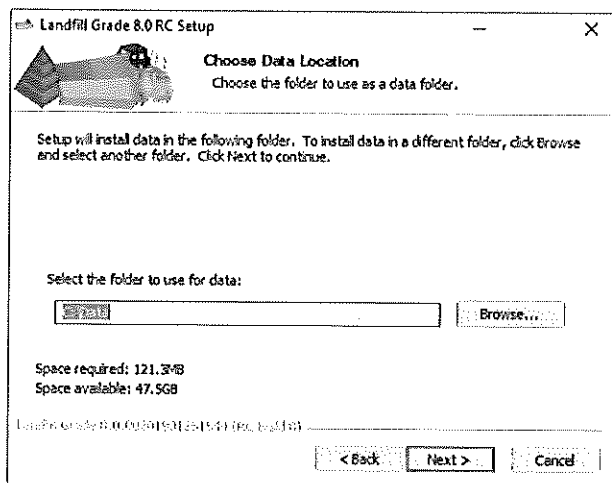
Install Location

Carlson suggests installing the program into the default directory. LandfillGrade™ is installed directly into the root of the hard drive, because LandfillGrade™ runs at the system level..



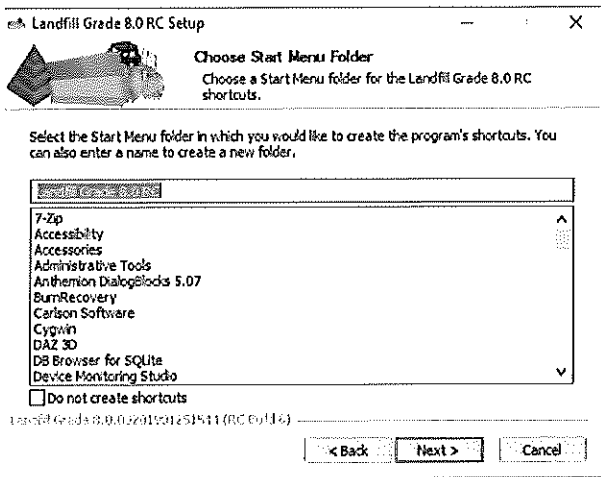
Data Location

Choose the location for the data files. Carlson recommends utilizing the default location. It can be changed to accommodate a data drive on the control box.



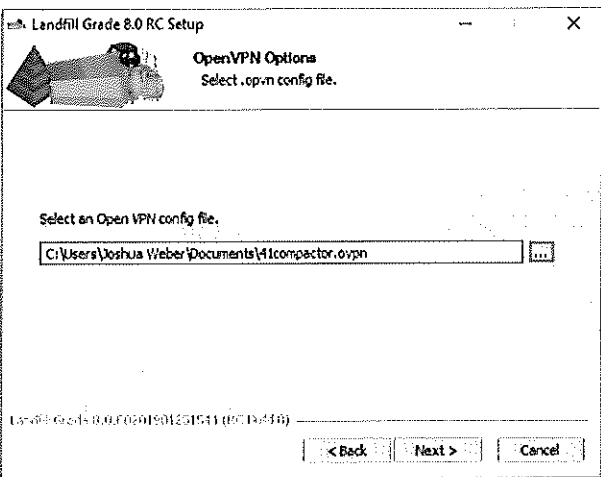
Start Menu Folder

When LandfillGrade™ installs, it creates a folder in the Windows Start menu. The name of the Start menu folder can be changed.



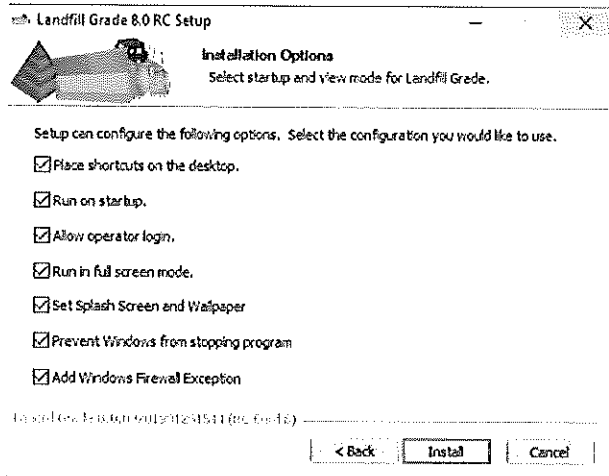
OpenVPN Options

Upload a .OVPN configuration file for connecting to Carlson Command. Contact Carlson support to obtain this file.



Installation Options

LandfillGrade™ can be installed with several options.



- **Place shortcuts on the desktop** - Place a Shovel Grade shortcut on the Windows desktop for easy access
- **Run on startup** - Configure a scheduled task to start Shovel Grade on user login of Windows
- **Allow operator login** - Configure Shovel Grade to start at the operator login screen. Operator lists can be configured in Carlson Command. A default operator is created on install. The operator is called "rover" and the Operator ID is 24680
- **Run in full-screen mode** - Run Shovel Grade in full-screen mode without a border. This maximizes screen space and allows for a seamless operator experience.
- **Set Splash Screen and Wallpaper** - Set the Windows desktop to the Carlson Shovel Grade wallpaper
- **Prevent Windows from stopping program** - Prevent Windows from putting Shovel Grade into "Not responding" mode. This is important because Shovel Grade needs to run without interruption while accessing system level resources.
- **Add Windows Firewall Exception** - Create a rule in the Firewall that allows Shovel Grade to communicate with Carlson Command.

While LandfillGrade™ installs, this process may take a few minutes depending on the speed of the computer.

Product Registration

LandfillGrade™ is licensed using an Upgrade Option Authorization file (cg.uoa). This file licenses the software for regular use as well as enabling additional features. If no prior UOA of LandfillGrade™ is detected (see Software Activation License) the software will prompt for one to activate the install in the initial setup of the software.

LandfillGrade™ will run on a temporary UOA file for 30 days before disabling communication through the serial ports. To register the product, press "About LandfillGrade™." If the software is being run as a demo on an office computer then this step is not necessary.

Once installed, go to Tools>About>Support>Product License>Activate License and record the 20 Digit code provided there. Please remember that this activation code is not the Serial Number for the license. The Serial Number can be found in the invoice from the purchase. If the software was purchased from a licensed Carlson dealer, please contact that dealer to obtain the serial number. Once you have the 20 digit code and the serial number go to:

UOA Request Form

This license will enable features of LandfillGrade™ dependent on application and options purchased. You may purchase new features at any time. Most licenses will be returned quickly, but please allow up to 24 hours to obtain the UOA file. Once you have downloaded the file, press "Load License" on the 20 digit code screen. Next, navigate to the location of the file "cg.uoa." Select the file and press "Load." This will activate your license of LandfillGrade™ Software.

About PDGrade
PDGrade Version 6.3.1
Copyright © 1997-2015 Carlson Software. All rights reserved.
www.carlsonmachinecontrol.com
US Patents: #6,191,732 and #6,655,465

Available Disk and Memory Space
Total Disk Space: 909,411 MBytes
Free Disk Space: 785,669 MBytes
Available Memory: 4,095 MBytes



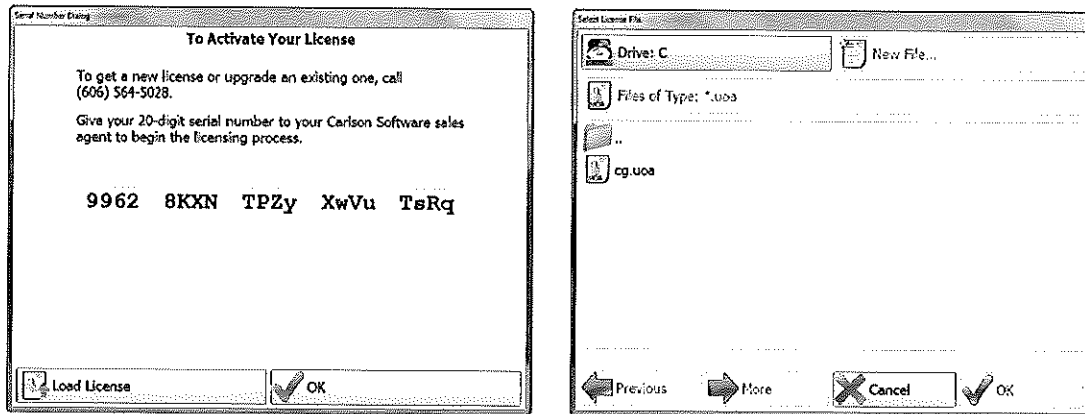
Support and Contact Information	
Technical Assistance and Support	
For urgent technical assistance contact Carlson Software at (606) 564-5028 or for more detailed information send an e-mail to the following addresses:	
Support:	incsupport@carlsonsw.com
Product License	

LandfillGrade™ Reference Manual

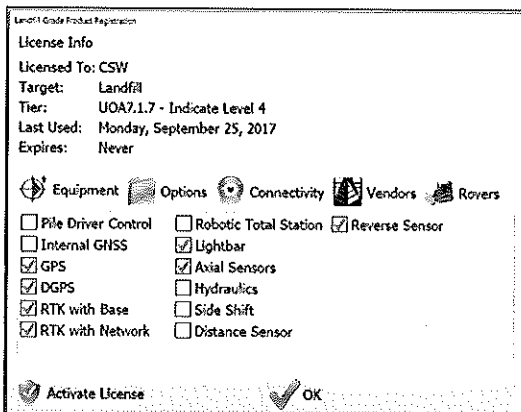
After obtaining a UOA file, save a duplicate of the file for future use.

Note: Do not rename or otherwise alter the cg.uoa file. This will invalidate the file. To store multiple files on a single drive, separate them with folders.

Press 'Load License' from the previous screen and select the 'Drive' that contains the Authorization Code (UOA) needed to license your product. Next, press OK and LandfillGrade™ will be activated.



The Product support options you have purchased will have the boxes checked after the UOA is loaded as shown.



Getting Started with LandfillGrade™

LandfillGrade™ requires a project consisting of a Plan View file, Design Surface, and a localization. To upload these files, go to **Tools>Advanced Tools>Configure Projects** and then **New Project**. Enter a name for the project. The **Edit Project** dialogue will then be presented and all files and configurations pertaining to this project should be uploaded or set. Detailed instructions for setting up a project are available in the **Edit Projects** section of this manual.



OPERATOR INTERFACE

If operator login is chosen as an install option, the operator is required to enter their ID when grade starts. This allows for reporting the productivity of each individual operator.

Operator lists can be configured in **Carlson Command**. To login, the operator keys in an id. **Switch Keyboard** opens an alphanumeric keyboard to access both numbers and letters. From this screen, the operator logs in, exits the program, reboots the control box, and shutdown the control box.

Enter your operator id number to login.

Switch Keyboard

Operator Name: Rover

Clear

Back

Employee ID:

1

2

3

Shift: 1st

4

5

6

Date: 7/7/17

7

8

9

Time: 01:04 PM

0

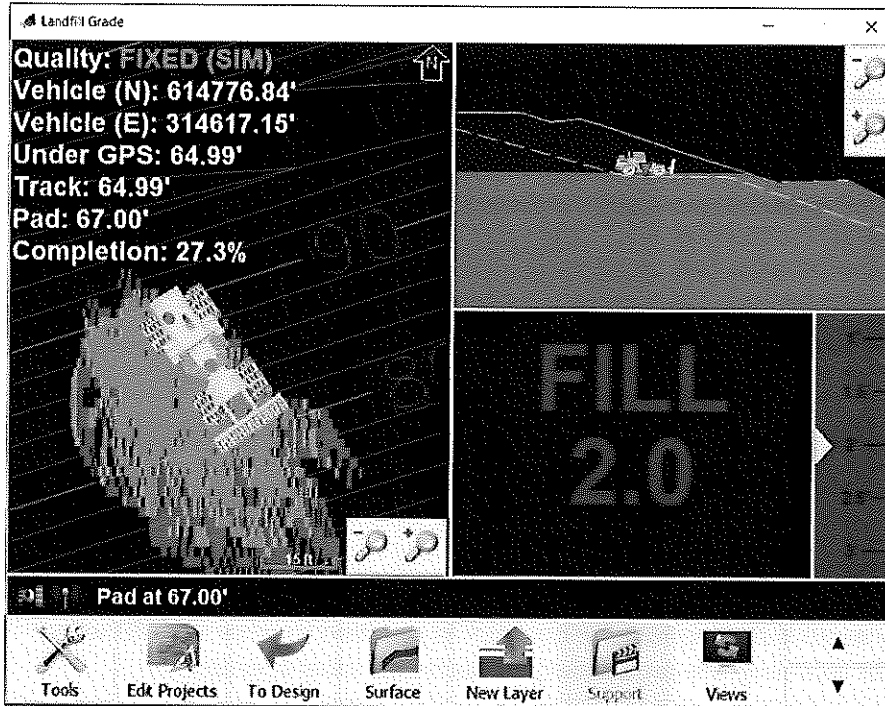
Stream Server: Trying to connect...

Shutdown

Reboot

Exit

OK



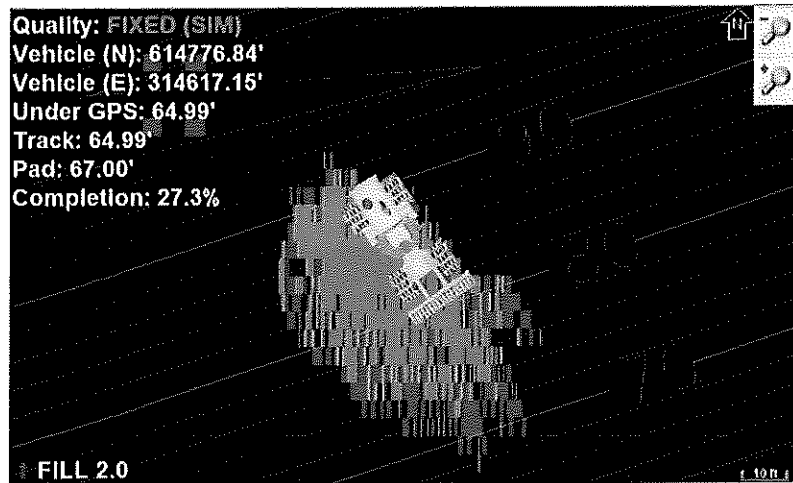
The operator interface is designed to give the machine operator information on the intermediate, and final design of the landfill, as well as feedback on how the waste is being placed. In the default setup, the operator has a toolbar across the bottom and a combination of screens showing different views. By pressing the views button on the toolbar different combinations of views can be shown. There are several possible combinations but for this overview, we will focus on the primary components. The **Views** section of **Advanced Options** contains detailed information.

For the operator to receive feedback a project will need to be loaded. Detailed instructions on configuring projects is in **Tools>Advanced Tools>Configure Projects.nd** localization. The green surface is created from the **Flat Pad** feature.

Plan View

The **Plan View** is the top-down, two-dimensional view of the working area. This view includes the machine icon and the machine's horizontal position. The plan view typically shows **Line Work** that helps the operator locate themselves on the site.

In most views, the plan view will have the Text Display in the upper left corner. This information is configurable in the **Text Display Options**.



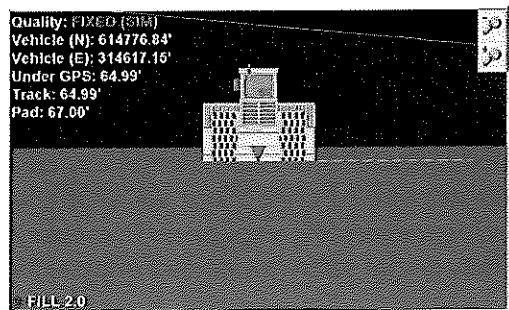
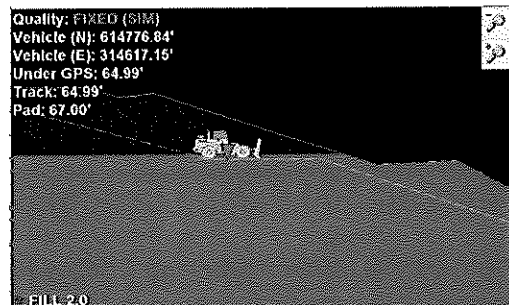
A color map can be displayed here as well. This give the operator information about how the waste is being placed. The **Compaction** option is shown here. This shows the operator if the waste is deflecting or solid and compacted. This can be configured in the **Surface Options** menu.

The operator can zoom in and out using the zoom buttons in the upper right corner of the screen, pan around by placing a finger on the screen and dragging, or quick zoom by double tapping.

Profile/Cross Section Views

Profile and Cross Section are similar. They are views that show a slice through the surfaces and the machine. They show the vertical position of the machine as well as the horizontal. The profile view creates the slice from the side view of the machine, and the cross section from the rear.

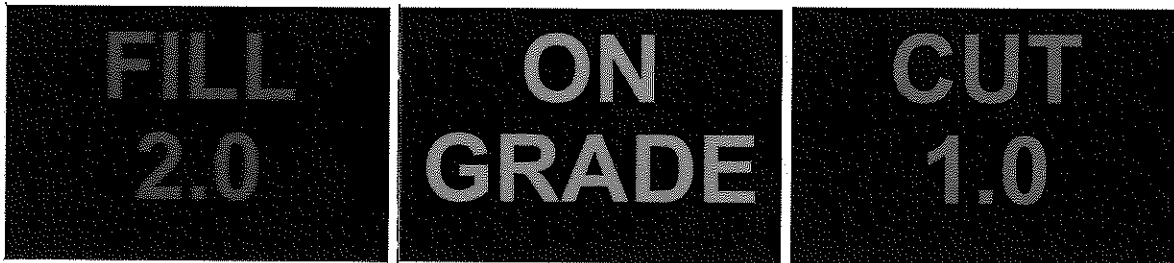
These views show a few critical pieces of information for the operators. The outside solid line with the hashes is the top-of-waste (TOW) design. The green area represents an intermediate design. this could be a lift or layer of waste to be placed. This can be created from the **Create Slope** or **Flat Pad** features. The dashed line represents the **Existing** surface that is updated by the position of the machine.



Additionally you can see the cross and long slope in this view. The text values can be added from the **Text Display Options** menu.

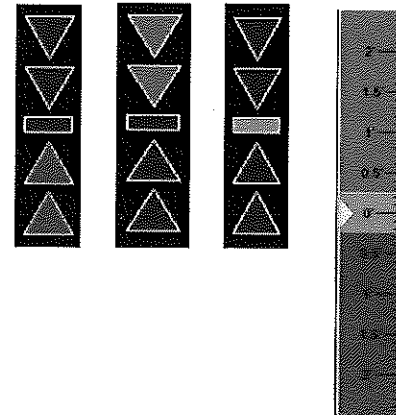
Cut/Fill

The cut/fill display will show how far the cut/fill location on the machine is from grade.



This display will be available on every view. For defaults, LandfillGrade™ uses blue for fill, red for cut, and green for on-grade. The available options are large colored text, small colored text, light bars (arrows) and the cut/fill tape.

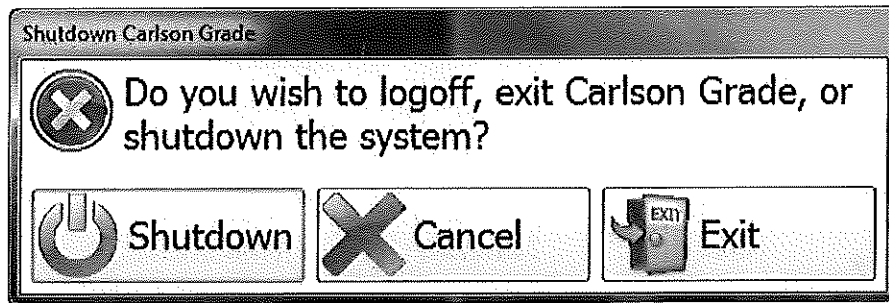
Note: The cut fill location is configured by a combination of antenna offsets in the **Configure Vehicle** section and the **Cut/Fill** setting in **Tools>Options>Surface Options>Cut Fill Options**.



Starting and Exiting LandfillGrade™

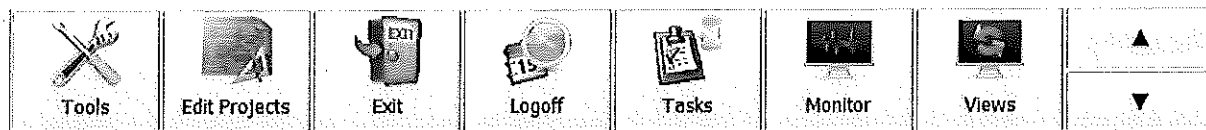
With official Carlson Machine Control hardware, LandfillGrade™ can be tied into the ignition power of the machine, so when the machine is started, the control box will automatically turn on and load LandfillGrade™. When the machine is turned off, LandfillGrade™ will automatically close and the control box will shut down.

LandfillGrade™ is installed onto a Windows P.C. Click on Tools and then click on the button that reads, Exit or Shutdown. If you click on **Exit** you return to Windows, if you click on **Shutdown** the control box will shut down. Our goal at Carlson Machine Control is to make the software versatile enough so that everything, including downloading data files, may be done through the software instead of by exiting the software.

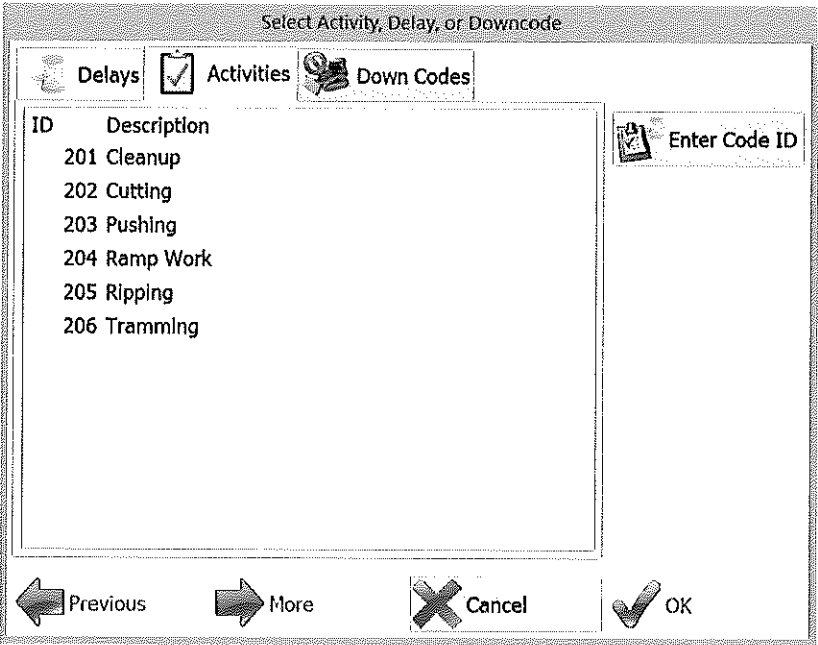


Activities, Delays and Down Codes

To give operators the option to insert activities and delays for reporting purposes, place the "Tasks" button in the Toolbar. To do so, go to **Tools > Options > Display Options > Advanced Display Options > Toolbar Display Options** and assign "Tasks" to one of the vacant slots.



Press **Tasks** to select a new activity, delay, or downcode.

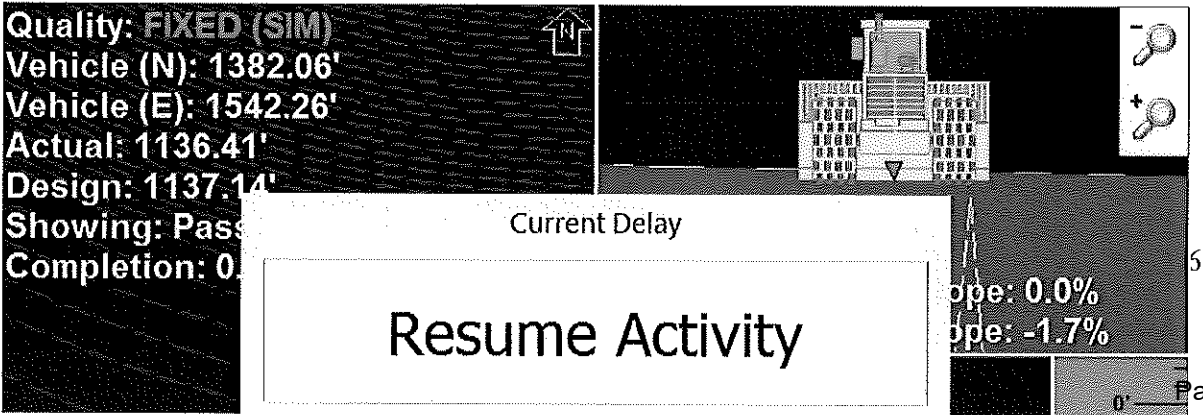


Activities

An **Activity** is simply a description of the work being performed. In a landfill this might be the type of material being placed. Press any activity and then press OK. **Carlson Command** will track the amount of time spent on each activity. The activities, delays and down codes can be edited or created in Carlson Command. Activities can be made mandatory under **Tools>Options>System Options>Advanced System Options>Require Activity**. When this option is selected, the tasks menu will appear after Grade start, operator login, or change of project.

Delays

A **Delay** is anything that causes the machine to sit idle with LandfillGrade still running. This might be a break, sitting waiting for more waste, fueling or some other task that causes the machine to stop. When a delay is selected a button will appear on screen. This button will show the start time and duration of the delay. When the operator presses the button the delay will end. A delay can be set to trigger automatically after the machine has been idle for some time. This is configured under **Tools>Options>System Options>Advanced System Options>Auto-Delay Time**.



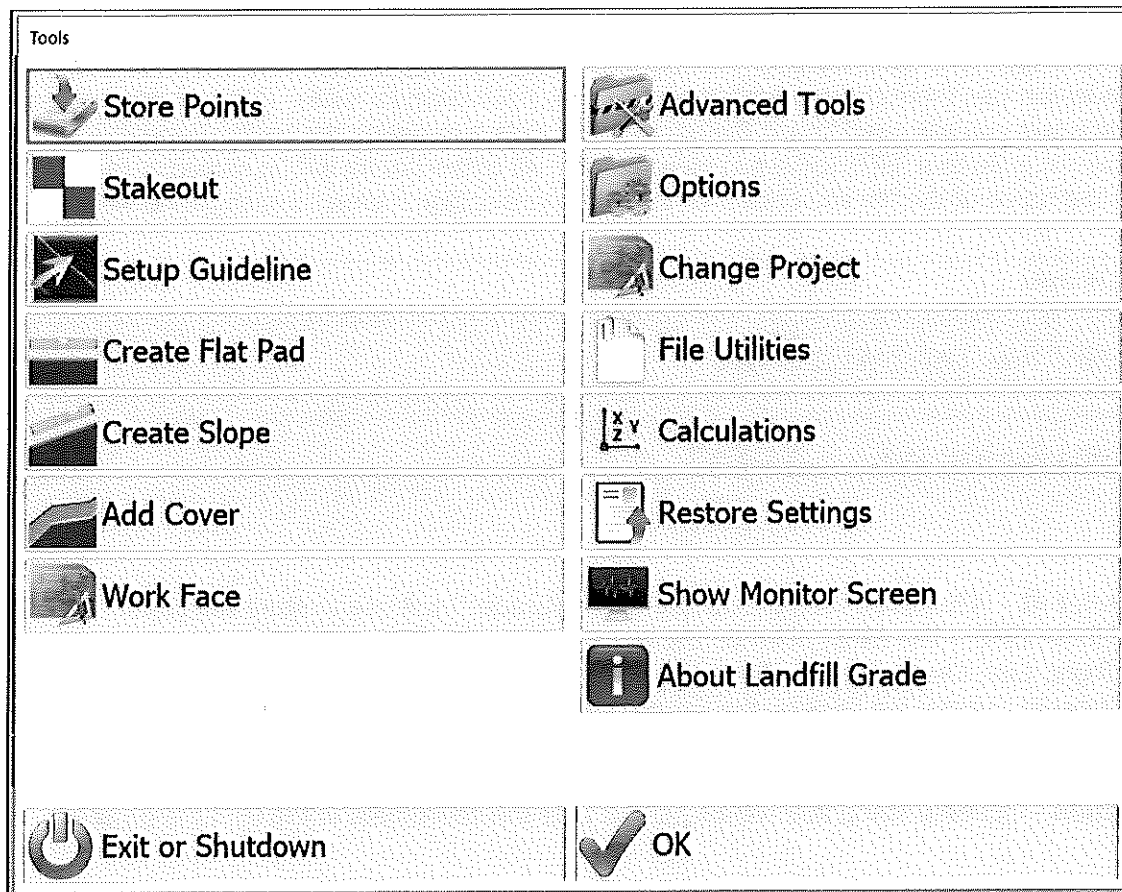
After finishing the delay and work is resumed, the operator will press “Resume Activity” to resume the last activity or “Change Activity” and the Select Activity, Delay, or Down Code dialogue is presented.

Down Codes

Down codes are any event that will cause the machine to shut down. This might be a tag for scheduled vs. unscheduled maintenance or specific issues with the machine. These codes will show the supervisor using command the current status of the machine. Down codes are cleared when LandfillGrade is started again.

Tools Menu

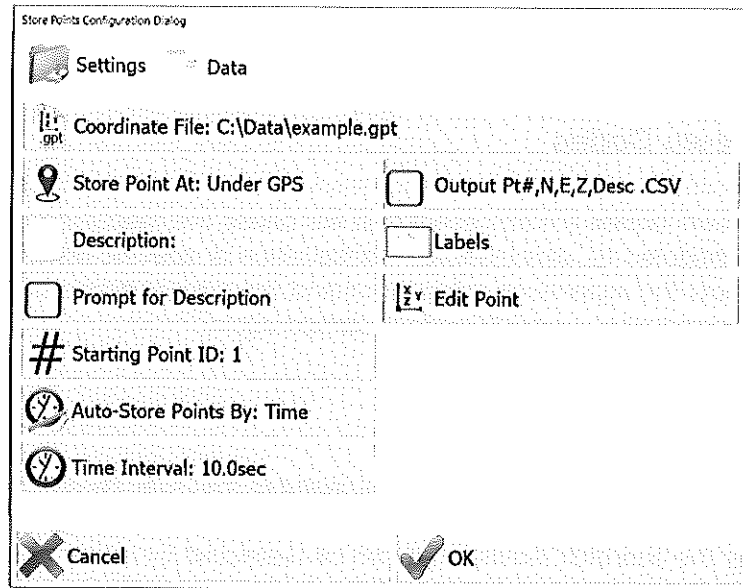
The Tools menu contains many features that may be commonly used in LandfillGrade™. Many items may be used like a second level for the toolbar as they are utilities meant to be access by the operator; however, it can be restricted by a user password. The **Advanced Tools** section accesses advanced features and may have a separate administrator password.



Store Points

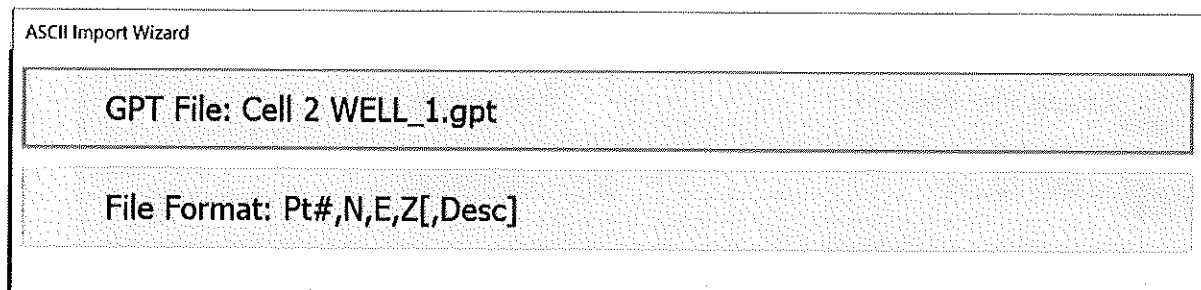
The Store Points routine captures points by interval and/or by single shot. These stored points can be used later to create design surfaces, calculate Cut/Fill volumes against another surface, or keep track of the location of hazardous materials.

The first page you will see when you open **Store Points** is the setup screen. This allows you to configure how LandfillGrade™ will take the points.



Settings

Coordinate File - Choose an existing or create a new file to store your points in. You can select a .crd, gpt, .txt, .asc, .ascii, or .csv file containing existing points. If you choose a .crd or .gpt Grade can use them automatically because they have defined fields. If you choose one of the other types you will need to use the ascii import wizard to define the fields. LandfillGrade™ will convert the file to a .GPT for use in store points. All of the points will be stored in the .GPT file with the name of the file you chose, or the name you assign it when creating a new file.



Store Point At - What point on the machine LandfillGrade™ will use to store the point

- Under GPS - The exact point on the ground under the GPS antenna
- Right, Left, Center Blade - The point under the blade based on the offset of the antenna
- Wheels - Under the GPS by the length of the machine but in the center by the width
- Front Center Axle - Center of the machine on the ground under the front wheels.

Description - Optional string that will be placed after the coordinate in the GPT file on each point.

Prompt for Description - Option to have LandfillGrade™ prompt the user for a description after each hole.

Starting Point ID - The Number that the .GPT file will start with when recording points.

Auto-Store Points By - In the Store Points screen you will have the option to auto-store points. You can do this by time or distance.

Time/Dist Interval - Depending on the last option the amount of time or distance between auto-stored points.

Output Pt#, N, E, Z, Desc .CSV - Option to also output the file a .CSV with the predefined fields. a .GPT is technically a Comma Separated Values (CSV) file, but it is formatted Pt#, E, N, Z, Desc

Labels - Options to show labels on the points as they are stored.

Tools

☐ Show Point ID

☐ Show Point Elevation

☐ Show Point Description

☐ Show Point Timestamp

Edit Point - This will open a menu that allows you to select a point and then edit it.

You can select the point from the list, or enter the **Point Number** you wish to edit. Press more to see more points. Once you have made your selection press OK.

Point Selection

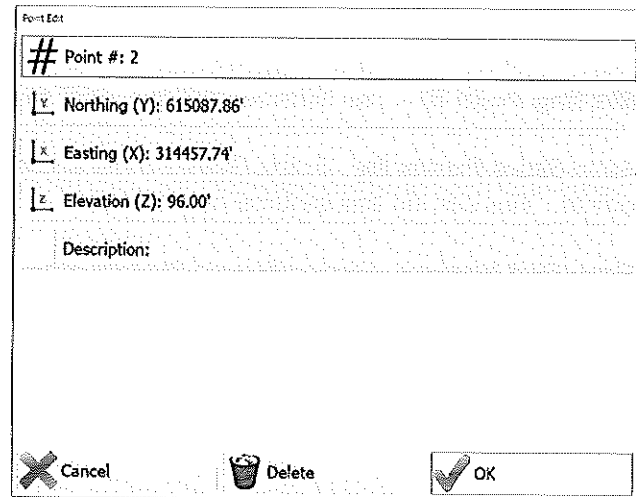
Select a point to edit.

By Point Number

Point	Northing (Y)	Easting (X)	Elevation (Z)	Description
1	615077.70'	314457.74'	96.00'	
2	615087.86'	314457.74'	96.00'	
3	615098.15'	314457.74'	96.00'	
4	615108.91'	314457.74'	96.00'	
6	615130.51'	314457.74'	96.00'	
7	615141.27'	314457.74'	96.00'	
8	615110.01'	314457.74'	92.44'	
9	615075.09'	314457.74'	94.49'	
10	615048.71'	314457.74'	96.27'	
11	615030.88'	314457.74'	97.78'	
12	615020.74'	314457.74'	100.00'	

Previous More Cancel OK

Once in this menu you can edit the coordinates, the elevation or description of the point you selected. Cancel will escape the menu without making changes, and Delete will erase the point from the file. OK Will accept any changes made.



Point Edit

Point #: 2

Y Northing (Y): 615087.86'

X Easting (X): 314457.74'

Z Elevation (Z): 96.00'

Description:

Cancel Delete OK

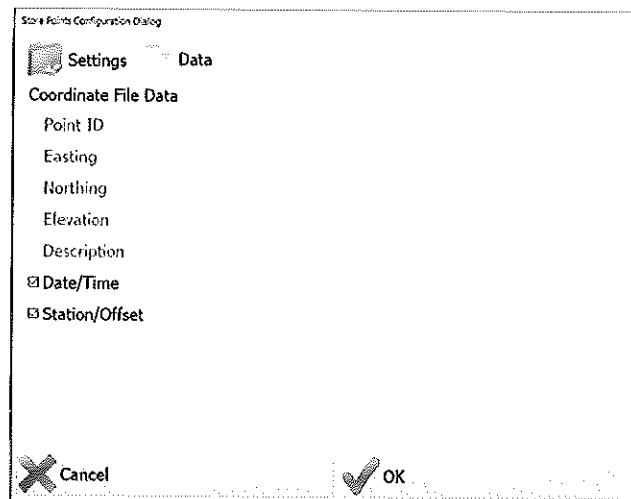
Data

The data tab shows what information and in what order it will be stored in the .GPT file. It also includes two optional fields for the .GPT file

Date/Time - will time stamp the point at the instant it is stored.

Station/Offset - will include the station offset information where the point is stored if a guideline is being used.

Once you are satisfied with the setup of the Stored Points, press OK to enter the Store Points screen.



Store Points Configuration Dialog

Settings Data

Coordinate File Data

Point ID

Easting

Northing

Elevation

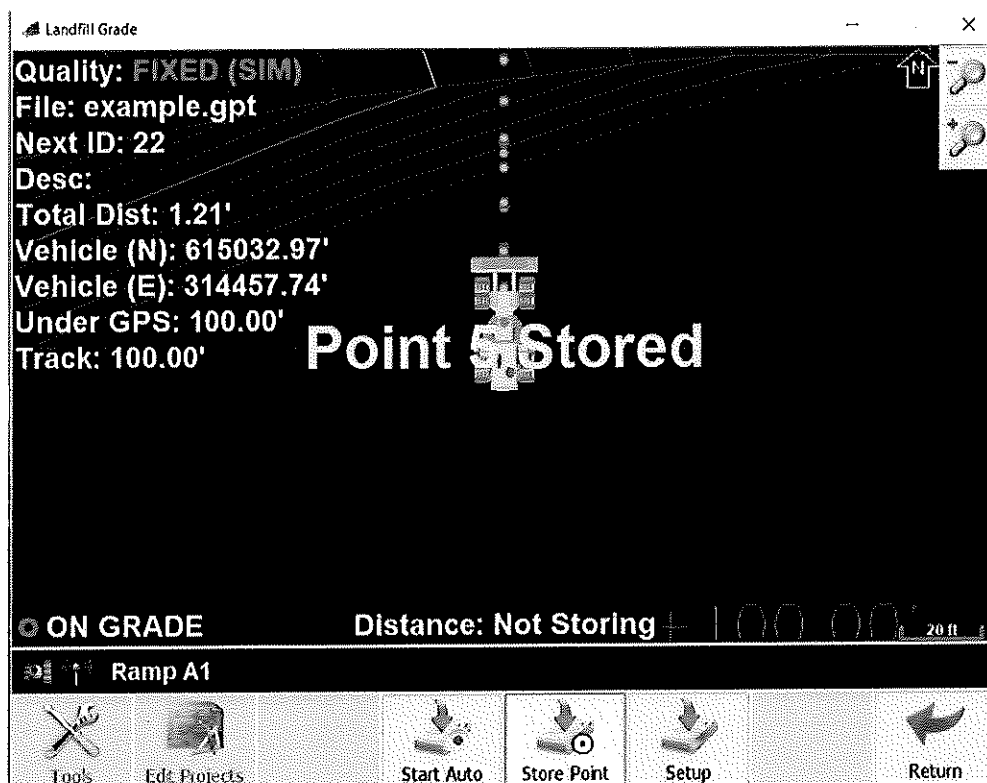
Description

☒ Date/Time

☒ Station/Offset

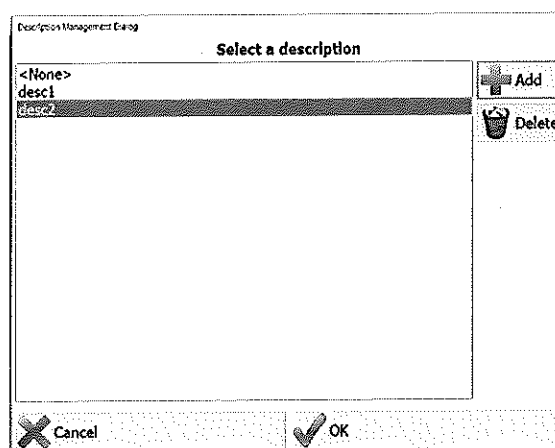
Cancel OK

Storing Points

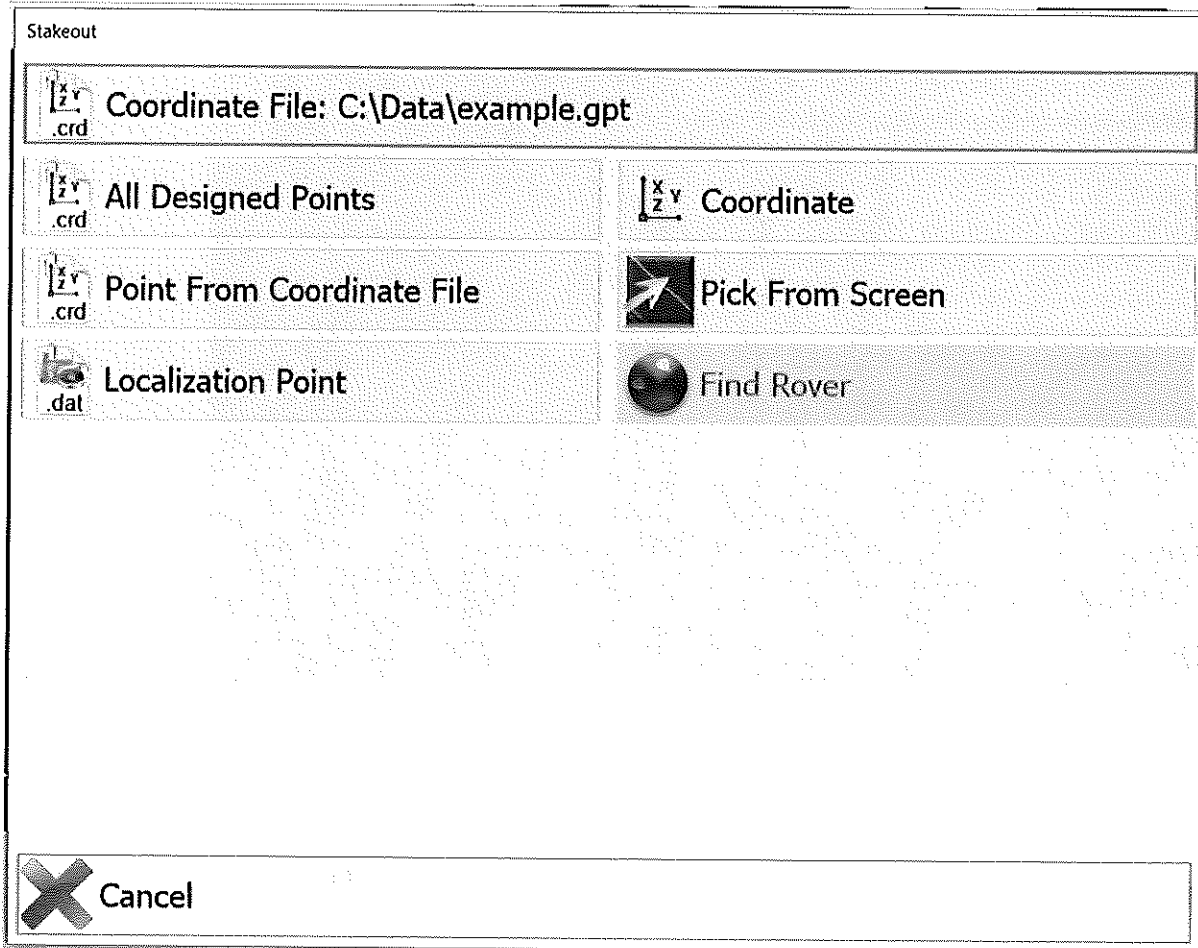


Once the setup is done you can begin storing the points. You will have a special tool bar for use in this screen. From here you can turn on the auto store with **Start Auto**, or store a single point with **Store Point**. **Setup** will return you to the settings menu.

If you have chosen to be prompted for each point, a menu will appear for each point that is recorded. You can select a pre-existing description, or can create a new one by pressing **Add**, and then using the keyboard to enter a new one.



Stakeout



Stakeout provides direction and distance to a chosen point to aid in navigation to that point.

Coordinate File - Choose an existing file to navigate to. You can select a .crd, gpt, .txt, .asc, .ascii, or .csv file containing existing points. If you choose a .crd or .gpt Grade can use them automatically because they have defined fields. If you choose one of the other types you will need to use the ascii import wizard to define the fields. LandfillGrade™ will convert the file to a .GPT for use in Stakeout.

All Designed Points - This will return you to the main screen with navigation guides and all of the point available and visible from the selected file.

Point From Coordinate File - Choose the point from a list, or by entering the point number of the selected file.

Point Selection

Select Point from List

X Y

Z

By Point Number

Point	Northing (Y)	Easting (X)	Elevation (Z)	Description
1	615077.70'	314457.74'	96.00'	
2	615087.86'	314457.74'	96.00'	
3	615098.15'	314457.74'	96.00'	
4	615108.91'	314457.74'	96.00'	
5	615039.38'	314457.74'	100.00'	
6	615130.51'	314457.74'	96.00'	
7	615141.27'	314457.74'	96.00'	
8	615110.01'	314457.74'	92.44'	
9	615075.09'	314457.74'	94.49'	
10	615048.71'	314457.74'	96.27'	
11	615030.88'	314457.74'	97.78'	

Previous

More

Cancel

OK

Localization Point - This will allow you to stakeout to the points in the localization file that is loaded in your current project.

Coordinate - Enter a coordinate manually to stakeout.

Find Rover (if applicable) - Guides the vehicle to other rovers that are working on the same network configuration (will require M2M or Heartbeat to be enabled)

Pick From Screen - Will return you to the main screen where you can select a point from the coordinate file by clicking on it.

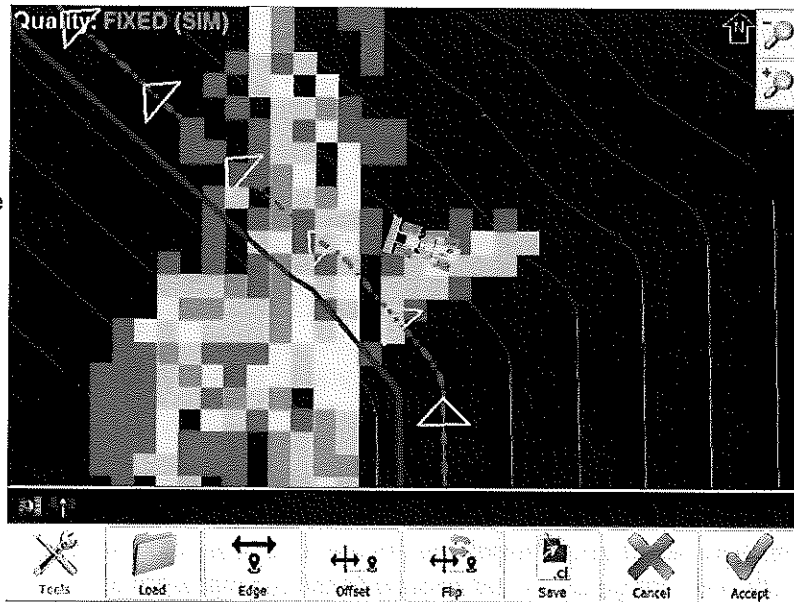
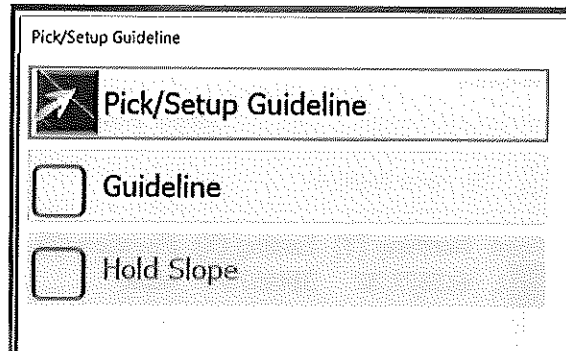
The direction compass in the top right provides directions to the point. The machine is located on the center of the target. The point being staked out will be shown on the outer circle of the compass and relative to the direction needed to reach the point. As the point is approached, the bullseye will move in closer to the machine and the arrow will turn green and become larger. Once the point is reached, the bullseye will be located in the center of the machine's referenced cut/fill location.

Setup Guideline

Selecting a guideline will display steering directions, distance from the selected guideline, and station information (if applicable).

Pick/Setup Guideline

- Choose a polyline from the plan view. The polyline will be highlighted when chosen.
- Edge: This selection chooses if steering directions towards the guideline will be measured from the left, center, or right hand-side (from operator's perspective).
- Offset: Enter a measurement to be offset from the polyline. Enter to 0 if no offset is needed. A positive number will offset to the right and a negative number will offset to the left.
- Flip: Flip will switch the direction of the guideline (arrows on the polyline display direction)
- To turn off the guideline, go back to "Guideline" and uncheck the box that says "Guideline."
- The following example has a guideline (see red line with arrows) and an offset of ten feet (see thick blue line to the right)



Guideline - Toggles the use of the guideline on and off in the plan view.

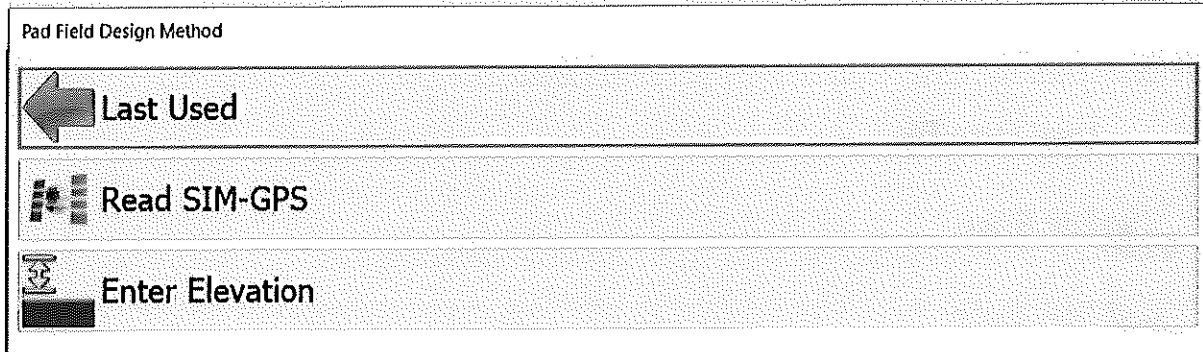
Create Flat Pad

The Flat pad feature creates a design surface at an elevation. This surface can be used to build a pad or a lift, or layer of waste.

Last used - Loads the last used flat pad.

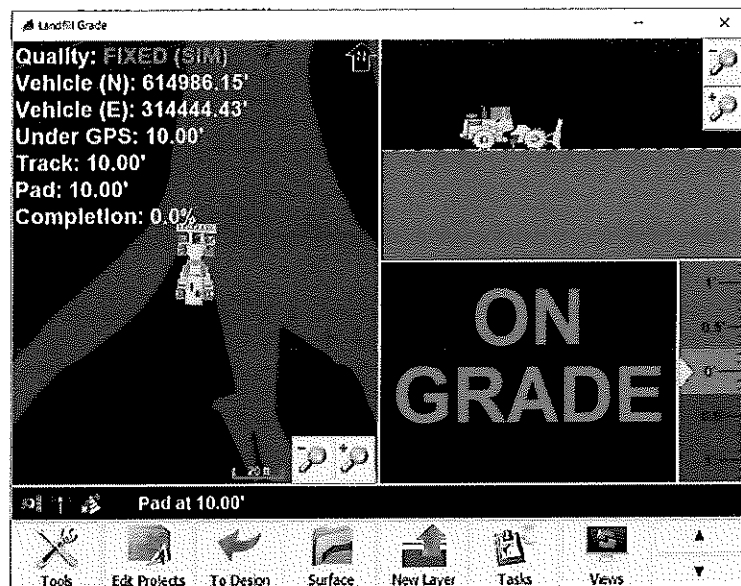
Read From GPS - This creates a flat pad at current elevation.

Enter Elevation - Manually enter a desired elevation.



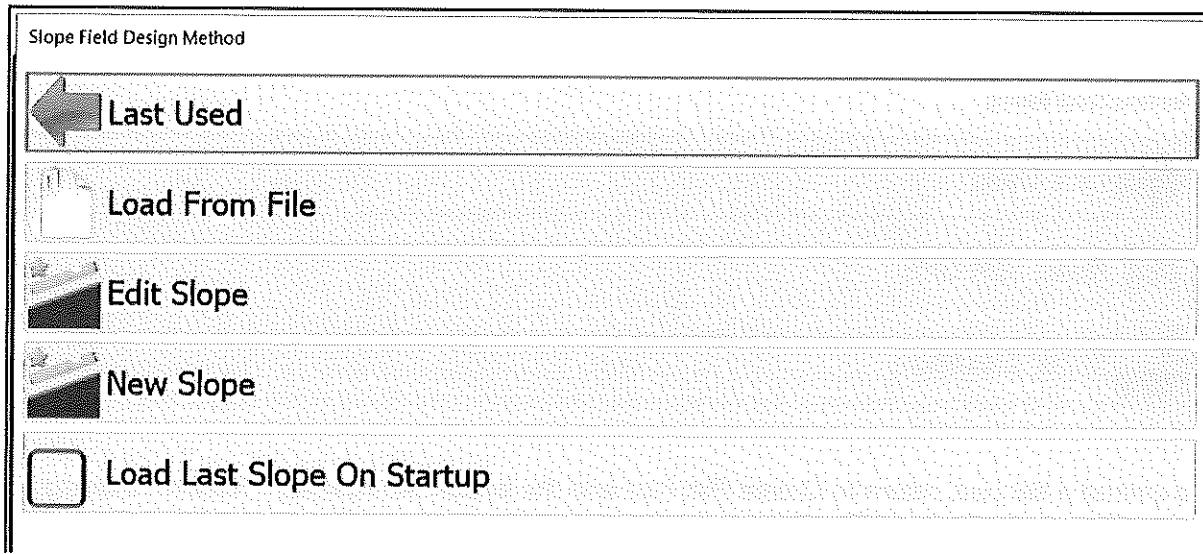
To unload a flat pad, return to Create Flat Pad and the button will now say "Return To Design." Press "Return To Design." The "New Layer" button in the Toolbar will add a vertical offset of a user-configurable amount to this Flat Pad.

Once loaded the Flat pad will take the place of the primary surface. It will give way to the top of waste on the outside slopes.



Create Slope

This allows the operator to create a new field design ramp or slope. This is often used instead of Flat Pads because it allows for a slight tilt in the pad which then improves the control of leachate



Last used - Loads the last used design slope.

Load from File - Loads a pre-created or saved design slope file.

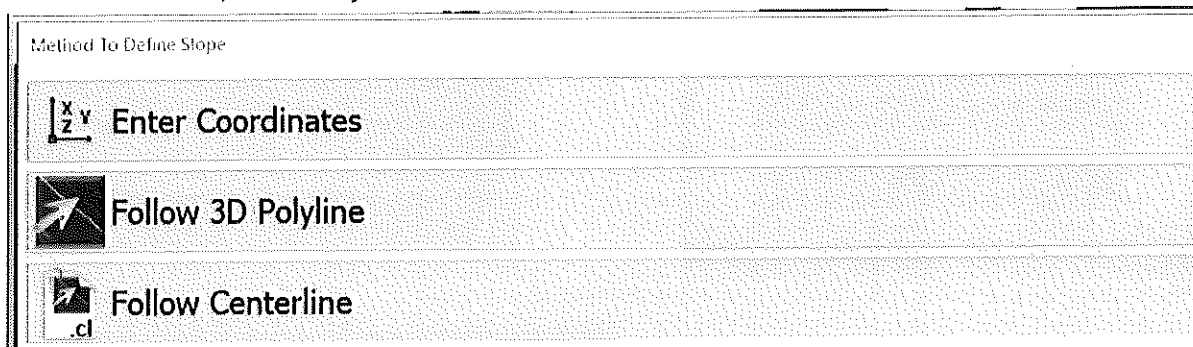
Select Predefined - Select a previously defined slope.

New Slope - Allows the field creation of a slope or ramp.

Load Last Slope On Startup - This will load the last use slope each time Landfill Grade starts after an exit, shutdown, or logoff.

Creating a new Slope

If you are building a new slope press **New Slope**. This will begin a routine to create the slope from coordinates, a 3D Polyline or a centerline file.



Enter Coordinates: This allows the operator to enter the coordinates of two points or to drive to two points and read from GPS.

Points from Coordinate File: This will show a list of points from the coordinate file loaded in the current project.

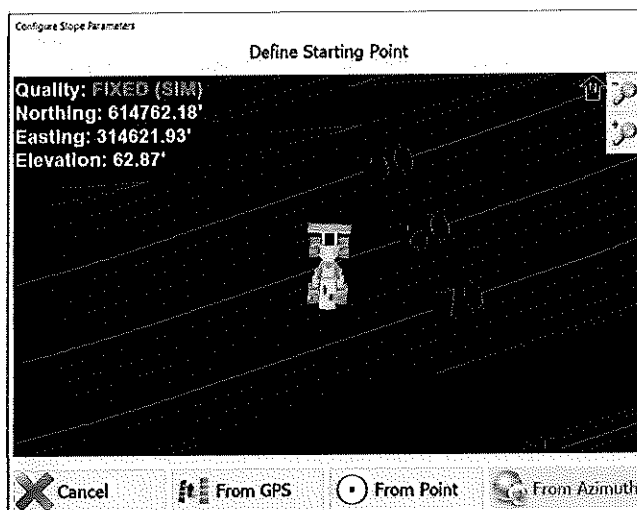
Follow 3D Polyline: This will allow the operator to select a polyline from the screen to use for horizontal and vertical alignment

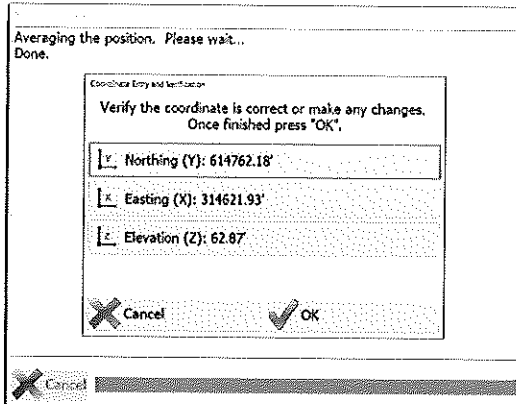
Enter Coordinates

In order to create a slope LandfillGrade™ need two points. This provides the forward direction for the slope, and can also provide the long slope.

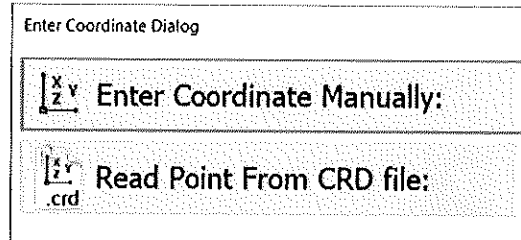
You will first be prompted from the first point. You can select this from the GPS reading or by choosing a coordinate

Choosing **From GPS** presents a dialogue showing the current location. If the coordinates are correct, press **OK**. The operator then maneuvers to the second point and then stores the second point.





From Point will take you to another menu where you can enter a point manually or choose it from the coordinate file loaded for the current project.



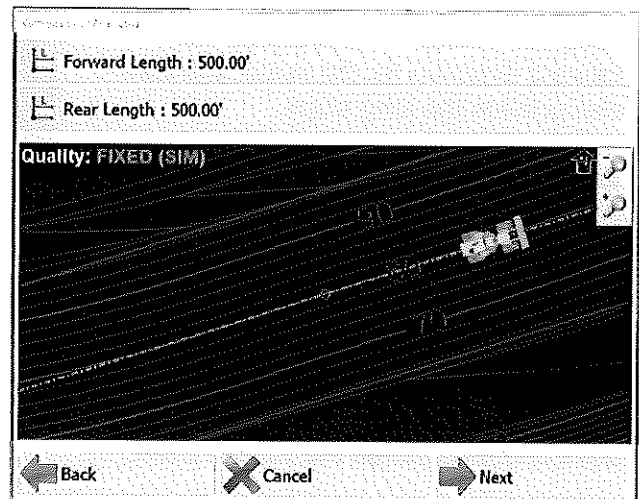
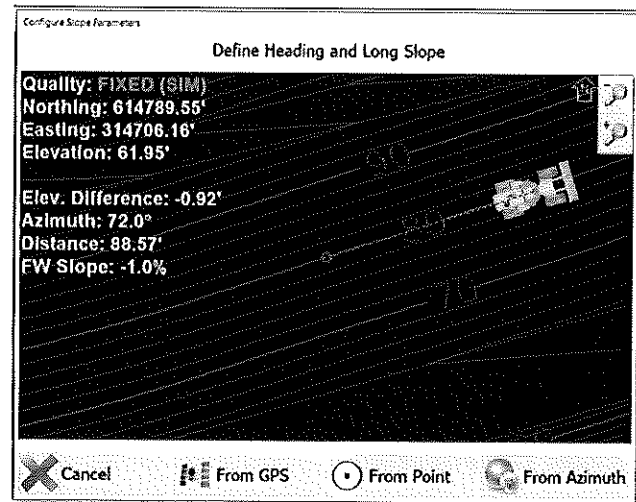
For the second point you have the same options for choosing the point. If using the GPS you will have a visual of the first point and the line between them indicating the direction of the slope. You can also choose the option **From Azimuth** which will allow you to manually enter the direction as an azimuth you would like the slope to go

After calculating the heading of the slope, you will need to set the length of the slope

Forward Length - The length of the slope in front of the first point

Rear Length - The length of the slope behind the first point

The point in the image is the **first point** that you selected. You can see that the slope continues past the point for the distance of the **Forward Length** and the slope starts before the first point (**Rear Length**). If wanting to make a slope over the entire top of waste, enter numbers large enough to exceed the size of the landfill. By design, the software will not allow the slope to exceed the boundaries of the landfill surface.



Press **Next**.

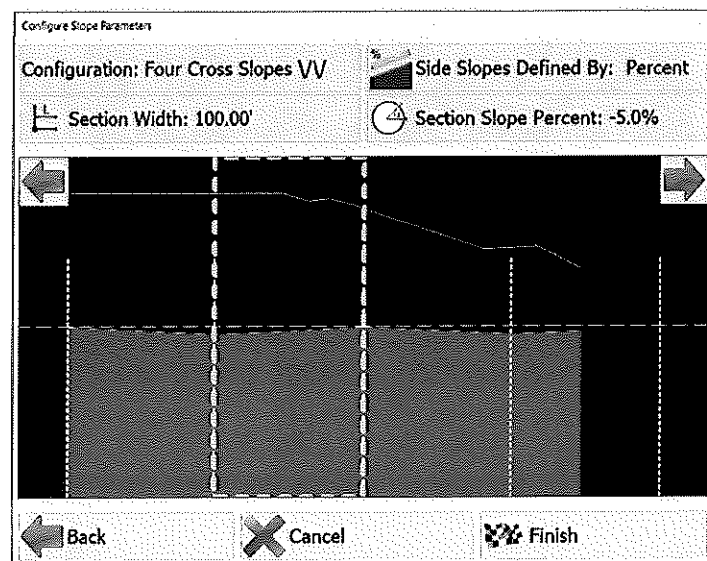
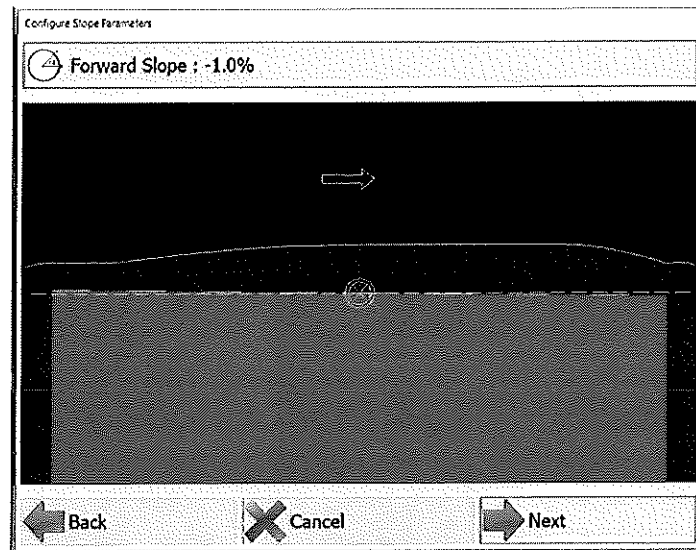
Forward Slope Percent - The forward slope of the design surface, in percent. A positive percent value means moving upward (positive grade) from point 1 to point 2. A negative percent value means moving downward (negative grade) from point 1 to point 2. This value will be calculated between the two measured points. The slope will default to the slope calculated between the two points.

The graphic shows the slope in relation to the design and existing surface if loaded.

Once the slope is set press **Next**.

Configuration - This refers to how many cross slopes will exist. LandfillGrade™ will allow you to design the slope to almost any shape.

Choose from no cross slope, one, two, four, or six cross slopes. You can configure the slope and width of each slope by scrolling through them using the arrow keys at the top corners of the view.

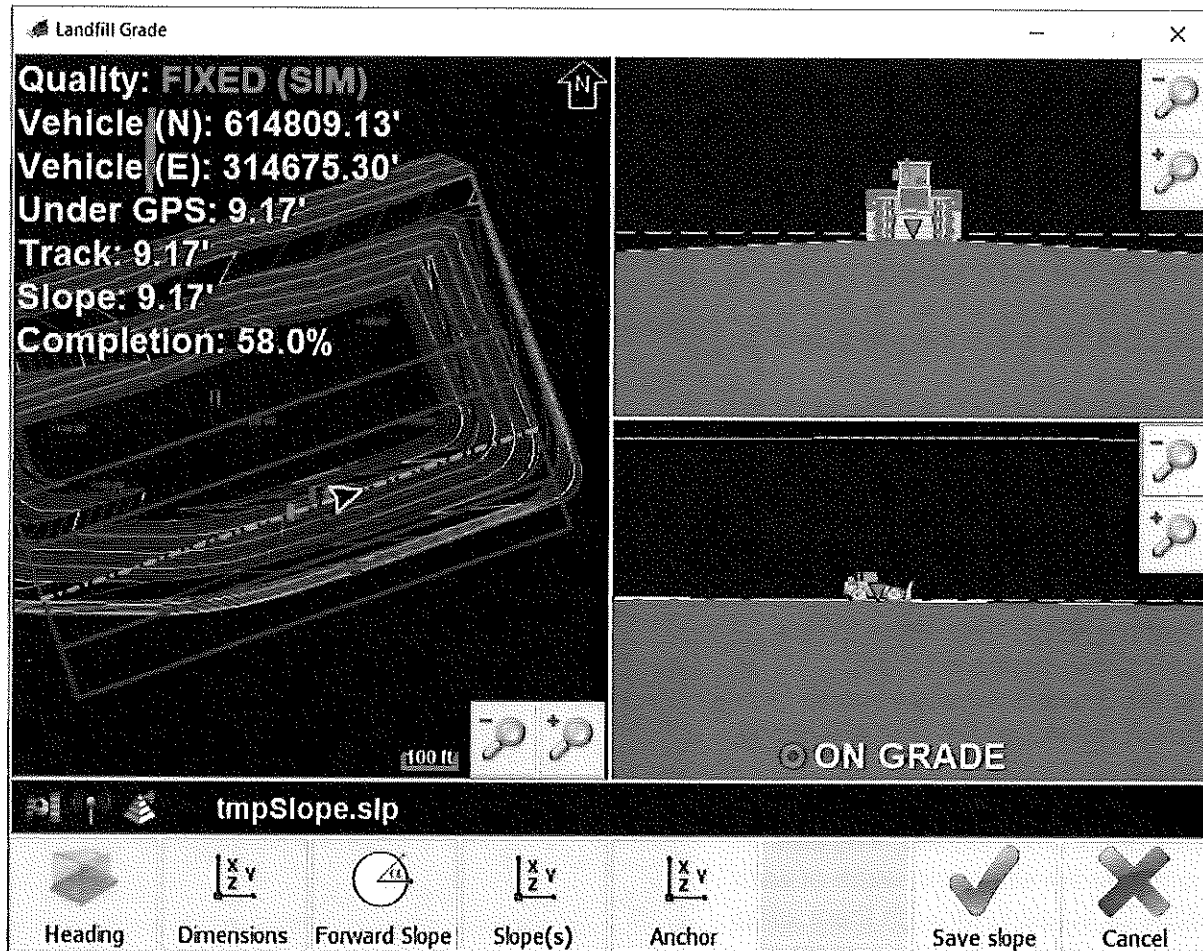


Side Slopes Defined By - Percent or Ratio.

Section Width - the width of each cross slope section depending on how many cross slopes you configured.

Section Slope Percent - the slope of the section. Positive slopes are going up from the center of the slope. Negative slopes are going down from the center.

Once you are finished defining the slopes, press **Finish**. The new slope will be shown.

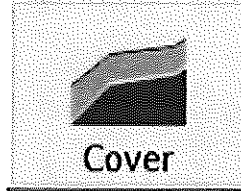


The toolbar buttons will return you to any part of the slope building process you wish to revisit. If you are satisfied press **Save Slope** to save the slope to an existing file or to create a new one.

This slope will now be the active design within the bouts of the top of waste design. The button for save slope will now read **To Design**. If you press that it will remove the slope and return you to the primary design.

Add Cover

Add cover can be placed on the toolbar or accessed here in the **Tools** menu.



The Add Cover feature allows the operator to use the existing surface of the as-placed waste for the day as the surface to offset from to create a design of cover. When the button is pressed the operator is prompted to enter a thickness for the cover.

The Existing surface will then be offset by that distance up, allowing the operator to grade to a exact height above the surface of the waste.

Numeric Entry Dialog

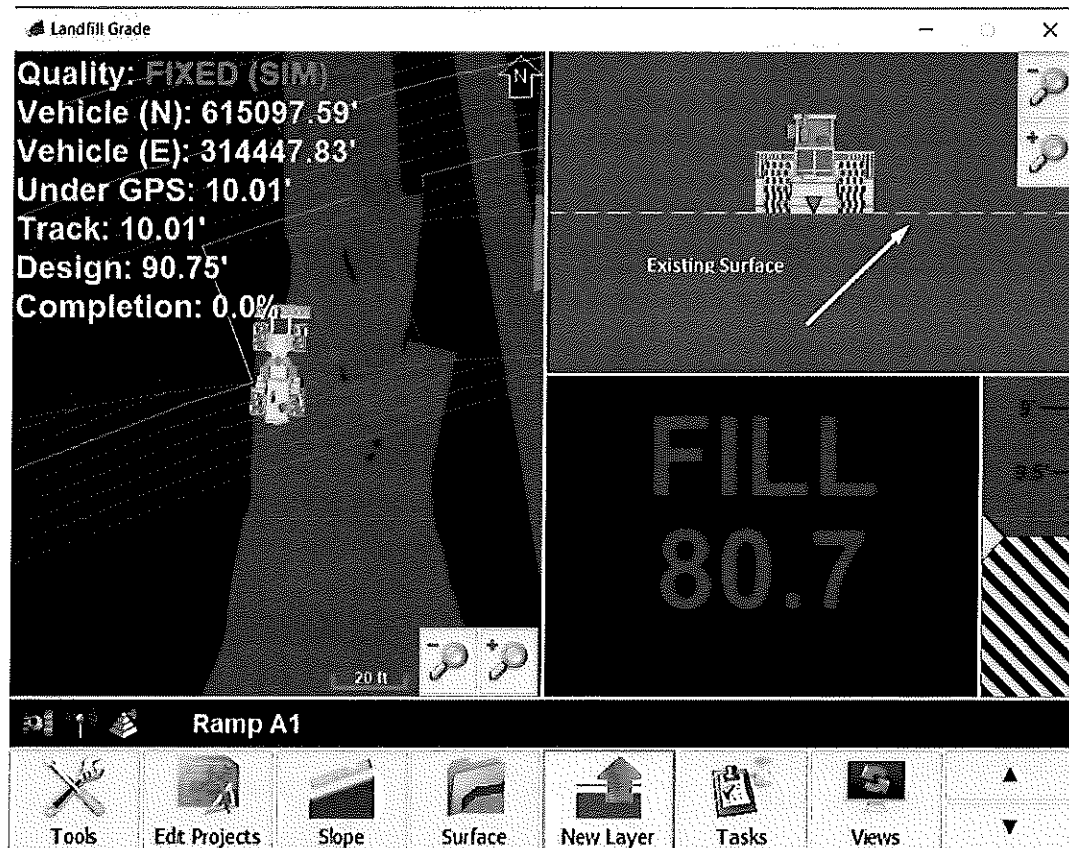
Enter Cover Thickness

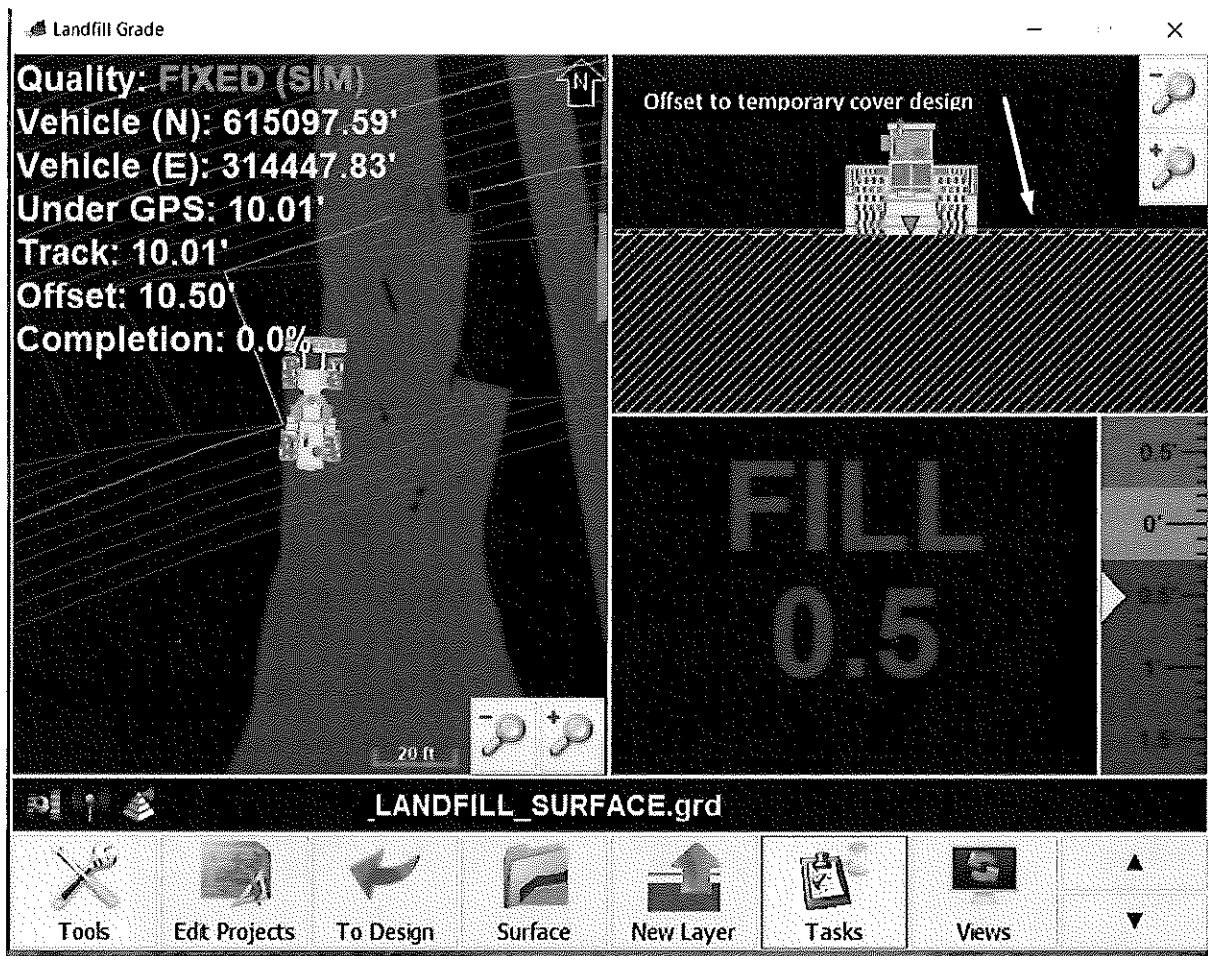
0.50

Clear Backspace

1	2	3
4	5	6
7	8	9
.	0	+/-

Cancel OK





Above showing the now offset surface for cover and a fill of .5ft.

Work Face - TODO

Work face can be placed on the toolbar or accessed here in the **Tools** menu.



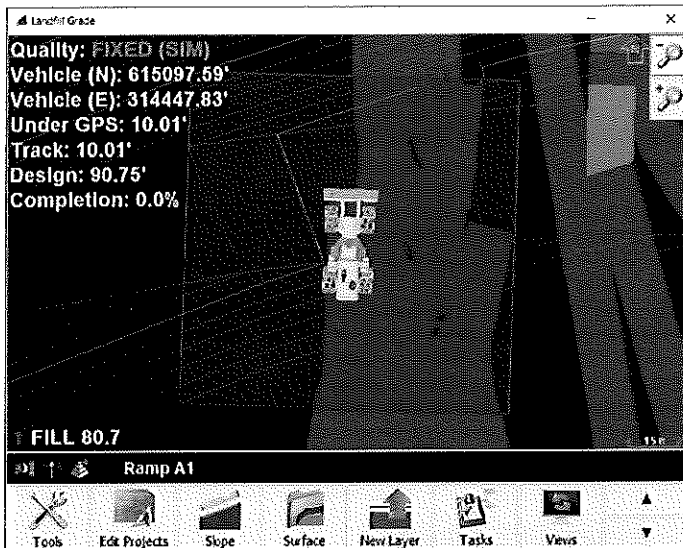
Work Face

The working face feature is a simple visual aid design to help an operator stay in a predefined area for a shift. This can aid in reducing the amount of cover dirt needed or making sure the working

Add Working Face	
Front Distance: 0.000m	Back Distance: 0.000m
Left Distance: 0.000m	Right Distance: 0.000m
Center Position (N): 0.000m	Set Position to Current
Center Position (E): 0.000m	Set Heading to Current
Center Heading: 0.0°	Configure Color
	Shift Current Perimeter
☒ Use Working Face	Direction: Right
Slope: 0.0%	Length: 0.000m
☒ Delete	☒ OK

face will be covered by a tarp.

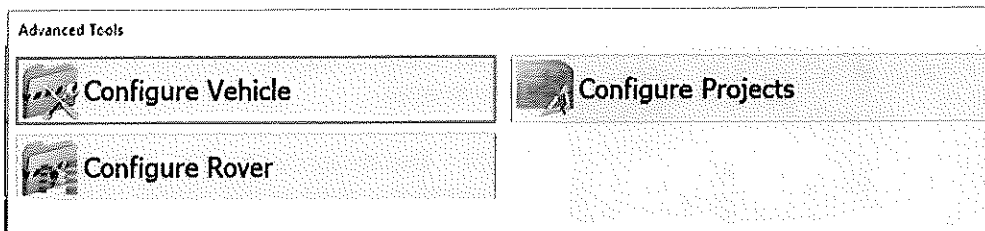
To configure the working face enter a **Front, Left, Back, and Right** distance from the position. You can use these distances to make the machine the center point of the area or only enter 2 of the distances to make the machine position the corner of the area. You can then enter a **Position** and **Heading** or use the buttons **Set Position to Current**, and **Set Heading to Current** to use the machine's current position and heading to create your area. The settings will always be saved, so any time you want to move the area you can enter this menu and update to the current positioning of the machine to set the new area.



The working face will appear on the screen as a transparent box with a bright edge that the operator can use as a guide to stay within for the shift.

Advance Tools

Advanced Tools is mostly accessed by Carlson Machine Control representatives and dealers. Here you are able to configure your project, vehicle, and GPS(Rover).



Configure Vehicle

Vehicle

LandfillGrade™ can be installed on a dozer, a pick up or compactor. This manual will focus on the configuration of a landfill compactor. For the dozer setup please see the Carlson Grade Reference Manual, and for a pick up see the Carlson Grade Supervisor manual.

Configure Compactor

This is the setup of the machine parameters and options. For a walkthrough, please see the Landfill Install Manual.

The menu is set up with a tree list of settings categories on the left. Select from the list and that will open the different menus for that type of setting.

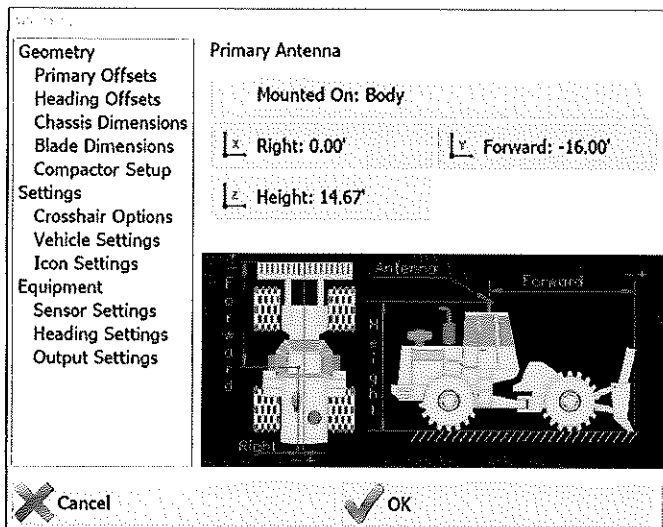
Note: This section is intended for a qualified installer. If you believe there are any issues please contact your Carlson representative. This section is for reference only.

Geometry

This section contains information about the measurements of the compactor or dozer

Primary Offsets

Enter the Forward, Right, and Height of the primary GPS antenna.



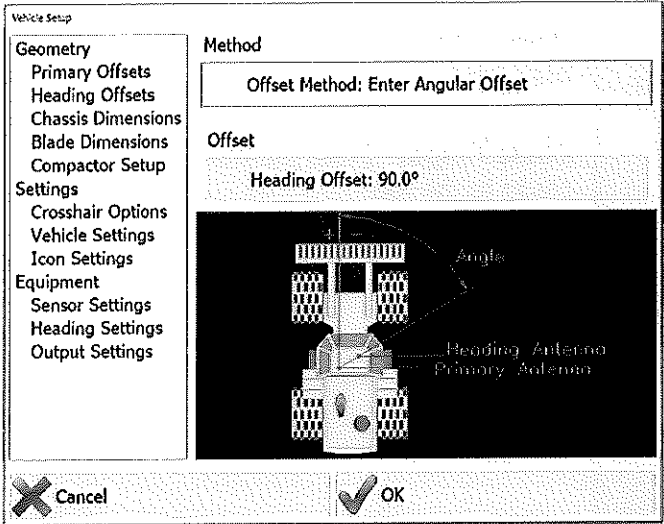
Mounted On - For compactors the Primary GPS will always be mounted on the Body. Dozers can have the GPS mounted on the blade.

Forward - The distance that the antenna is in from or back from center of the blade. Back is represented by a negative. (See image).

Right - The distance that the antenna is placed to the right of the center of the machine. If the antenna is to the left of the center of the machine then the Right will be negative (See Image).

Height - The distance that the antenna is above the ground.

Heading Offset



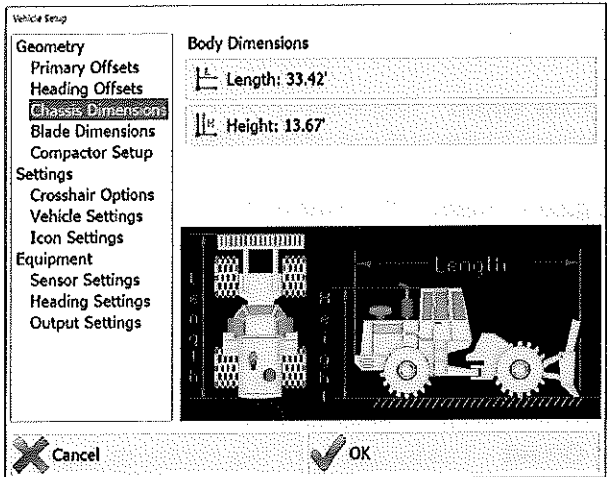
The Heading Offset is required if the installation is done with two GPS antennas used for heading instead of a reverse sensor. The Heading Offset is the difference between the calculated Raw Heading calculated by the GPS antennas and the actual heading of the machine.

In most cases where only one GPS antenna is used, this setting is not used for calculating position

See the graphics for further details.

Chassis Dimensions

These dimensions are for icon scaling. See visual for further clarification.

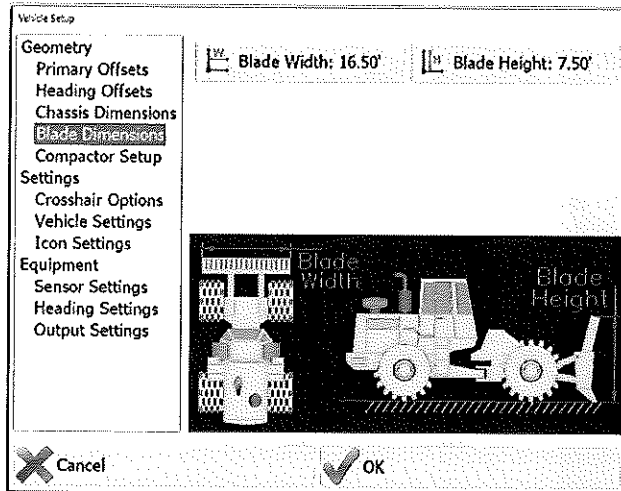


Length - Length of the machine tracks

Height - Distance from ground to top of cab.

Blade Dimensions

These dimensions are used for scaling the blade icon.

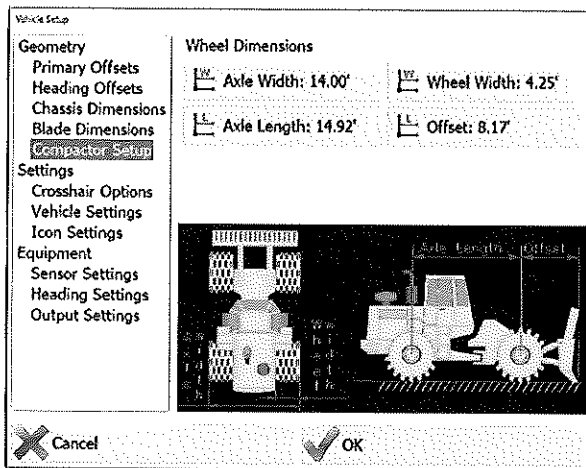


Blade Width - From the outside edges of the blade.

Blade Height - From the bottom of the blade to the top.

Compactor Setup

These dimensions affect how the compactor will affect the surface for pass counts, compactor and painting. They establish the position of the 4 wheels.



Axle Width - The length from the outside of wheel to the outside of the other wheel.

Axle Length - The length from the center of the drum of the front wheel to the center of the back wheel.

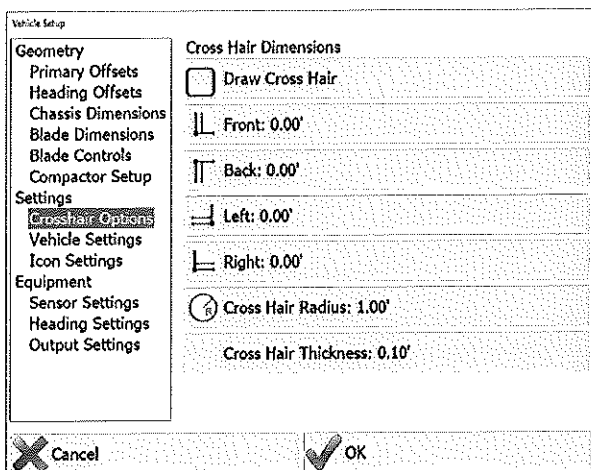
Wheel Width - The length from the outside of the wheel to the inside of the wheel.

Offset - The length from the center of the front wheel to the blade on the ground.

Settings

Crosshair Options

The crosshair feature draws a circle at a radius and lines across the cut/fill position.



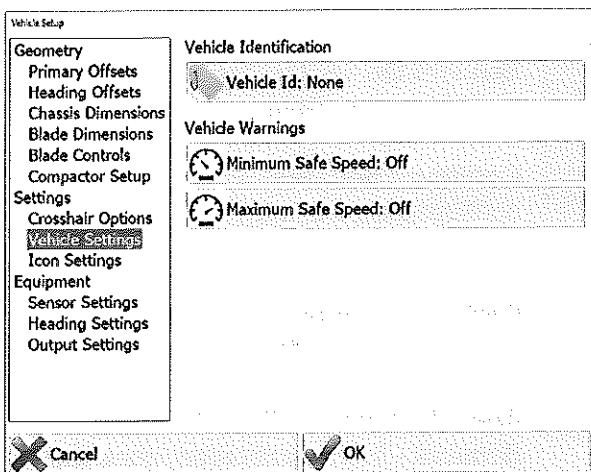
Draw Cross Hair - Turn the crosshair feature on.

Front, Back, Left, Right - Lines of a specified length across the cut/fill location.

Cross Hair Radius - Radius of circle drawn around the cut/fill location.

Cross Hair Thickness - Thickness of the crosshair lines.

Vehicle Settings



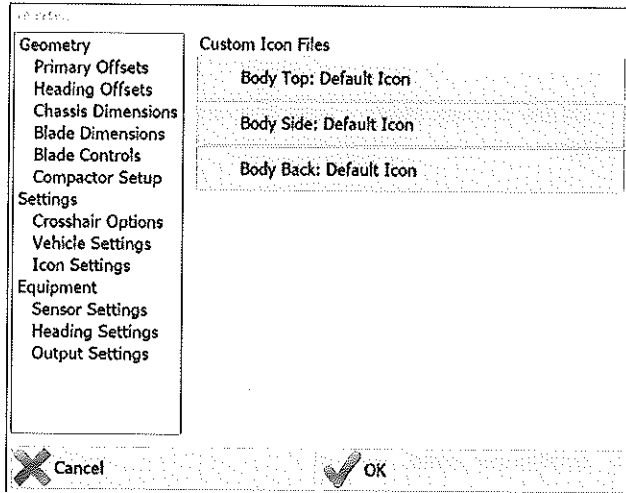
Vehicle ID (Deprecated) - This is the Heartbeat ID and is no longer used to identify the vehicle in Carlson Command. It can be set if broadcasting to other machines in Heartbeat Settings.

Minimum Safe Speed - If the vehicle goes below this speed the operator will see an alarm on the main screen.

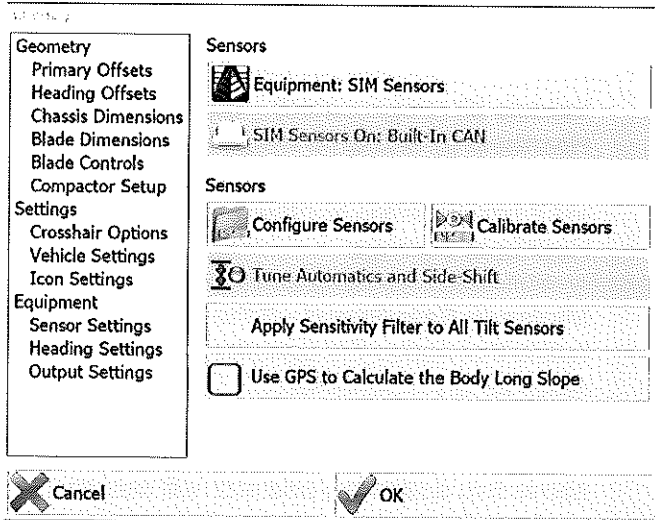
Maximum Safe Speed - If the vehicle goes above this speed the operator will see an alarm on the main screen.

Icon Settings

This feature allows the user to load custom icons for the vehicle. Select **Body Top**, **Body Back**, and **Body Side** and choose files for each.



Sensors Settings



Equipment - Select the type of sensors that are installed.

Sensors On - Select the interface (Serial or CAN) to the sensor.

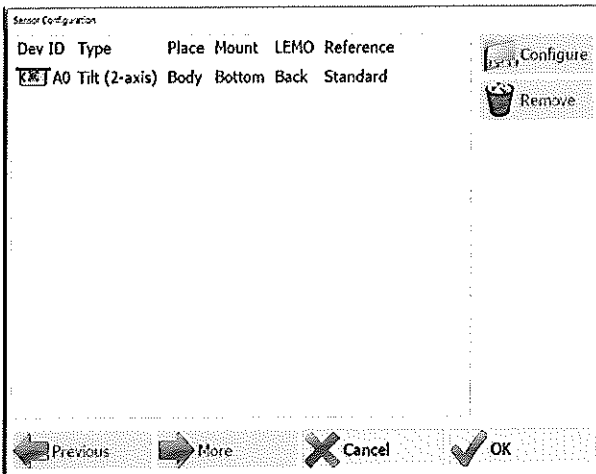
Configure Sensors - Enter the configuration menu for sensors. (See below)

Calibrate Sensors - Enter the sensor calibration menu (See below)

Apply Sensitivity Filters to All Tilt Sensors - In the calibration menu there

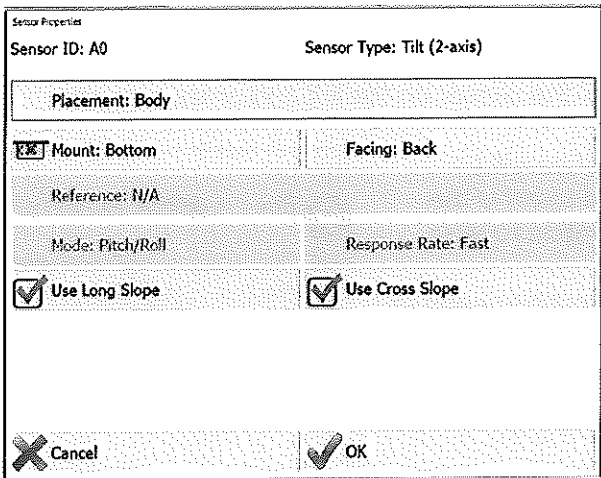
are filter levels that can be set to individual sensors. If you wish to set all of the sensors to the same filter level you can use this feature. Press the button and set the level, and then select **Apply to All**.

Configure Sensors



To configure a sensor select it from the list and then press the **Configure** button.

Remove will remove the selected sensor from the list.



Placement - Where the sensor is mounted.
Options: Body, Blade, Ripper, None

Mount - How the sensor is oriented.
Options: Top, Bottom (see image, for axial sensors only)

LEMO - This is the direction that the cable is facing with respect to looking forward in the vehicle (driver's perspective)

Use Long Slope - If unchecked, the long slope value calculated by the sensor will be ignored by the software

Use Cross Slope - If unchecked, the cross slope value calculated by the sensor will be ignored by the software

Calibrate Sensors

Note: This menu is part of the wizard and should only be performed by a qualified technician.

Numeric Entry Dialog

Enter the time (seconds) to average the sensor

2.00

Clear Backspace

1	2	3
4	5	6
7	8	9
.	0	+/-

Cancel OK

When you first enter the calibration menu you will be asked how long to average the sensors. This is how long the reading will be taken for calibration. Longer times will have better results but the default value of 2 seconds is adequate for most operations.

Sensor Calibration

Dev ID	Type	Place	Long Slope	Cross Slope	Rake
EXT A0	Tilt (2-axis)	Body	0.00°	0.00°	N/A

Calibrate Filter Tune

Previous More Cancel OK

Select the sensor on the left and press calibrate.

Tilt - You will be asked to enter the calibration routine.

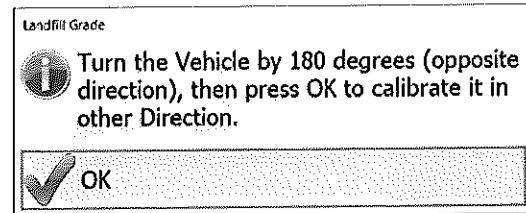
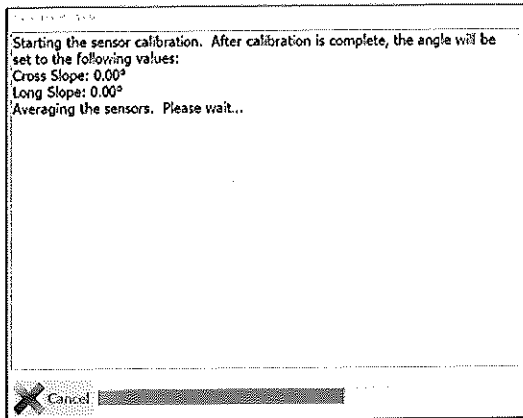
This routine needs to be run after all measurements are made.

Run the calibration routine?

No Yes

LandfillGrade™ Reference Manual

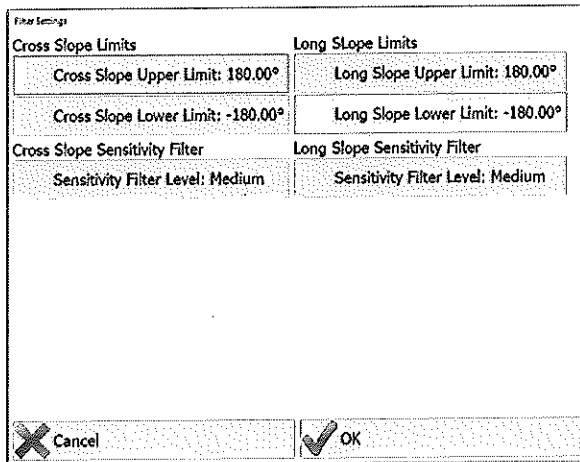
In order to use the calibration routine for the body sensor on a compactor you will need to choose a relatively flat, clean spot. Park the compactor and mark the spot at the center of the blade on the ground, and directly under the center at the rear of the machine. Once you are in position press **Yes**. LandfillGrade™ will then take readings. Once finished you will be prompted to turn the machine 180°. Use the makes you made to line up the machine. and press **OK**.



After this it will take another reading. When completed the machine's tilt sensor will be calibrated to the machine.

Tilt Filters

Tilt sensors can be filtered to reduce noise in the signal. Select the tilt sensor and press **Filter**.



The filters are separated into Cross and Long slope limits but function the same way.

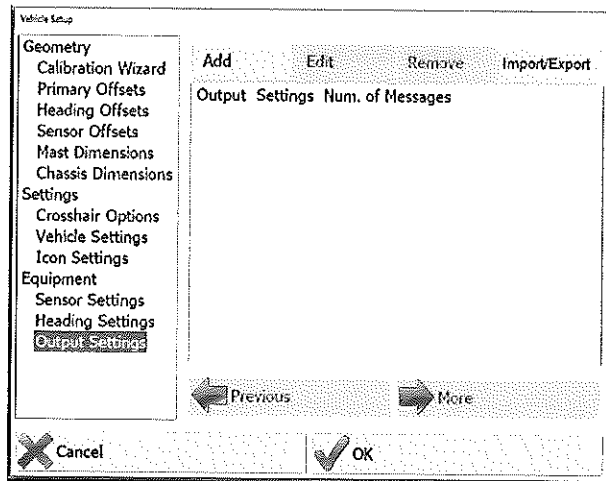
Upper and Lower Limits - In degrees the maximum and minimum values the program will use for slope.

Sensitivity Filter - This uses a weighted moving average to reduce noise in the sensor signal. The levels are **High**, **Medium**, and **low**. All tilt sensors are set to medium by default. Adjustments of these filters depends on the type of work performed and should be evaluated on a site-by-site basis.

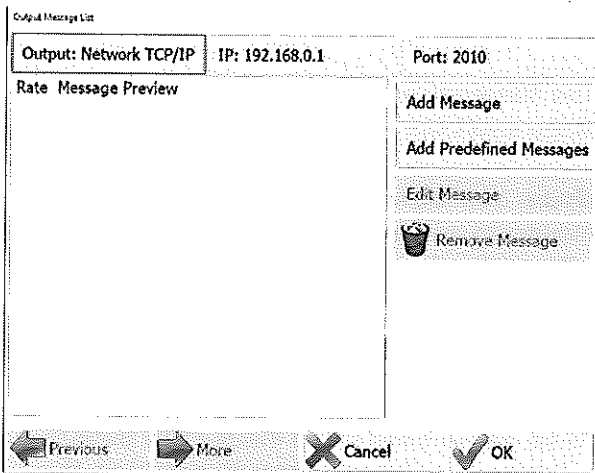
Heading Settings

If using a second GPS receiver for heading (versus using a single receiver that provides heading with dual antennas), configure it here using the same method discussed in the next section (Configure Rover). Alternatively, a Reverse Sensor can be used instead of GPS Heading. If so, select the port that the reverse sensor is on.

Output Settings



Data being used by LandfillGrade™ can be output for use by third parties. To create an output message Press **Add**.



Select the **Output** type from

- Serial
 - Port
 - Baud rate
- File
 - File Name
 - Start Every (Cycle time on file)
- Network TCP/IP
 - Destination IP
 - Destination Port
- Network UDP
 - Destination IP
 - Destination Port

Once output type is selected you can add messages to be output.

ID: 1	Type: Rate	Rate: 1 Hz	Preview Message
Field	Item	Format	
GPS	GNSS Date ISO 8601	YYYY/MM/DD	Add Automatics Field
GPS	GNSS Time ISO 8601	HH:MM:SS.SS	Add NMEA Field
GPS	GNSS Antenna Pos.	XXX.XX,YYYY.YY,ZZZZ	Add GPS Field
Position	Hammer	XXX.XX,YYYY.YY,ZZZZ	Add Vehicle Field
			Add Position Field
			Add Angle Field
			Add Empty Field

Move Up

Move Down

Remove Field

Previous

More

Cancel

OK

Set Parameters for the output:

- **ID** - starting number for ID field in output
- **Type** - Output type
 - Rate
 - Rate (in Hz)
 - Trigger
 - On event

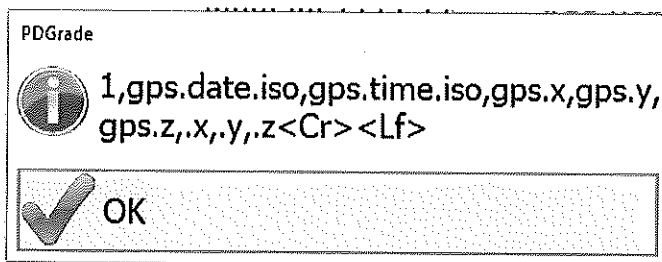
Choose Values to output (organized by category)

- Automatics
 - Blade control data
- NMEA
 - \$GPGGA
 - \$PLEIR,ORP (Fix: 254)
 - \$PLEIR,ORP (Fix: 2)
- GPS
 - GPS Date (ISO 8601)
 - GPS Time (ISO 8601)
 - GPS Lat and Long
 - Number of Used Satellites
 - GPS Position (Raw)
 - GPS Date (DDMMYY)
 - GPS Time (HHMMSS)
 - GPS Quality
 - GPS Time Latency
 - GPS Heading
- Vehicle

- Local Date (ISO 8601)
- Local Time (ISO 8601)
- Operator Name
- Machine Type
- Cutting Status
- Digital IO Box Output Values
- Analog Input 1 Value
- Vehicle Heading
- Local Date (DDMMYY)
- Local Time (HHMMSS)
- Vehicle ID
- Current Activity
- Digital IO Box Input Values
- Analog Input Value 2
- Pontoon Heading
- Position
 - Position At - position at specific point on machine
- Angle
 - Mount
 - Angle
- Empty
 - Empty
 - Zero
 - Custom

Other controls allow you to edit the message by **Removing** or **Moving** messages up or down in order.

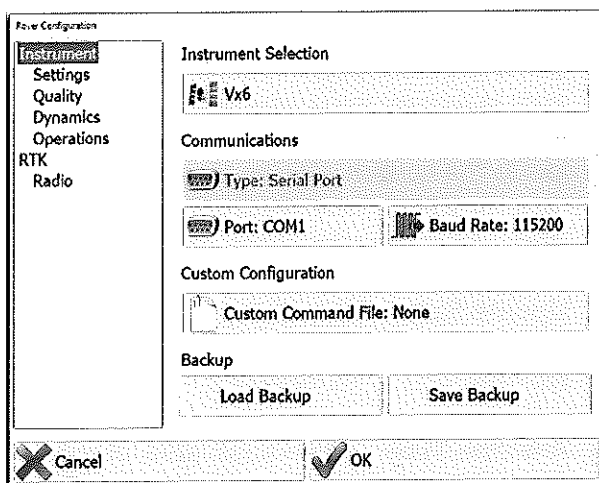
Preview Message will show the raw output.



Once configured data will stream on the desired port or device, or log files will be stored in [Data path]\Logs

Configure Rover

Instrument



Instrument Selection

Press the button to choose the primary GPS/GNSS rover being used from the list. Drivers are separated by tabs for manufacturers.

Note: Settings can vary widely depending on what GPS Driver is selected. This manual attempts to cover the most common configurations. If you are in need of further information please contact your Carlson Software representative.

Communication

Type - This is the type of connection being made to the receiver. Options: Serial Port, Bluetooth, or Socket (Network)

- Serial Port - If the GPS receiver is connecting to the computer through a serial port then choose that port and serial baud rate
- Bluetooth - If the GPS receiver is connecting to the computer with Bluetooth then click on "Remote Device." Then click on "Find Receiver" and choose the correct receiver. Make sure that the receiver name and ID matches. Enter the pin if necessary.
- Socket
 - IP of receiver
 - Port the receiver is listening on

Custom Command File - This is a file containing custom commands to configure the receiver you have selected. LandfillGrade™ will send this file to the receiver each time it is initialized.

Backup

This feature saves the settings for the receiver in a backup file (.RDF)

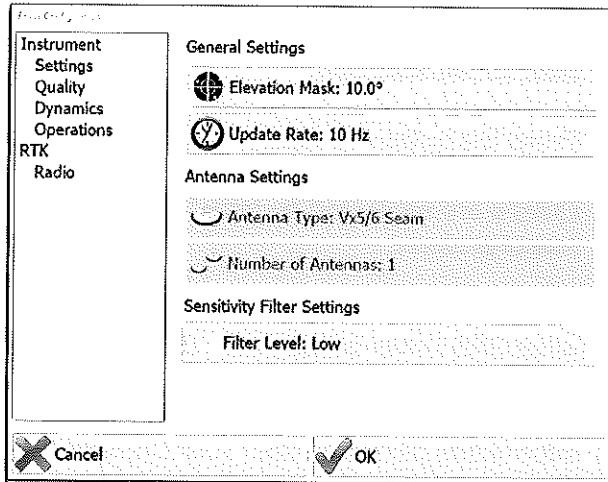
Load Backup - Select an .RDF to load settings from

Save Backup - Save an .RDF that can be loaded to restore settings at a later time.

Note: When leaving the Instrument page, LandfillGrade™ will make an attempt to contact the

receiver to load any additional parameters into the menu.

Settings



Elevation Mask: Satellites with a small angle between them and the horizon often give inaccurate data because of interference from buildings, trees, and landscapes. This allows the GPS receiver to ignore satellites low to the horizon. For landscapes, such as deserts, where there is vast open and flat land, a high elevation mask should be chosen.

Update Rate - The number of messages per second from the GPS receiver. This is typically 1, 2, 5, 10, or 20 Hz.

Antenna Type - When applicable, choose the model of the antenna being used. This

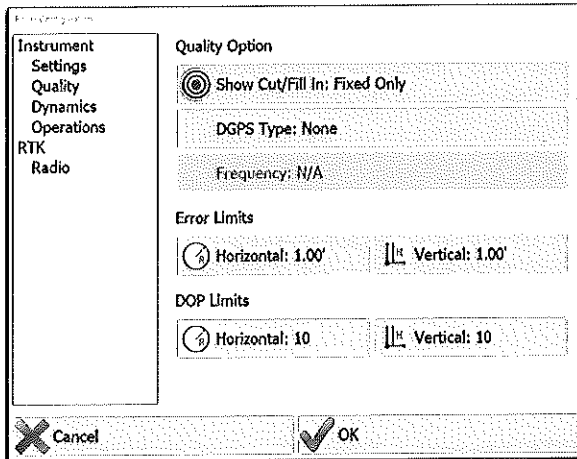
will add the correct offsets into the position calculation. If the antenna being used is not listed, then refer to the user manual of the antenna and enter those offsets manually.

Number of antennas Some Rovers use two antennas to calculate heading and so a second antenna may be entered in. If so, then enter an antenna separation below.

Antenna Separation - Enter the distance between the two antennas (if applicable).

Sensitivity Filter Level - This filters out noise in rough terrains. Set this to "high" in very rough terrains and "low" in very smooth terrains.

Quality



Show Cut/Fill in - Choose if the software should provide indication in only "Fixed" solutions or in "Fixed and Float."

DGPS Type - None, SBAS, MSK Radio Beacon, Omnistar, or e-Dif

Frequency - Choose frequency for Omnistar

Error Limits - Enter a tolerance for Horizontal and Vertical error for indication values to be shown when in a Float position

DOP Limit - Enter a tolerance for HDOP and VDOP for indication values to be shown when in a Float position

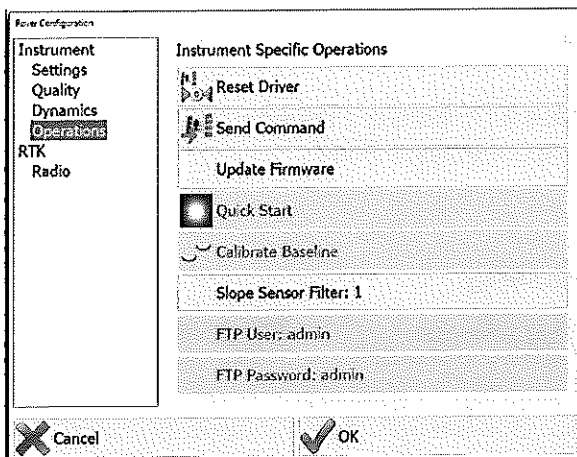
Dynamics

Dynamic Response Settings: these are dependent on the GNSS receiver. See the manufacturer's details.

Use GLONASS - Allow the receiver to use the GLONASS constellation if available.

Use BeiDou - Allow the receiver to use the BeiDou constellation if available.

Operations



Reset Driver - This will reset the receiver to the factory defaults (receiver specific)

Send Command - This opens a command prompt for direct communication with the receiver using scripts. The scripting language will be per receiver.

Update Firmware - For Carlson receivers the software is able to perform a firmware upgrade. Please refer to the receiver specific quick guide on updating your receiver's firmware.

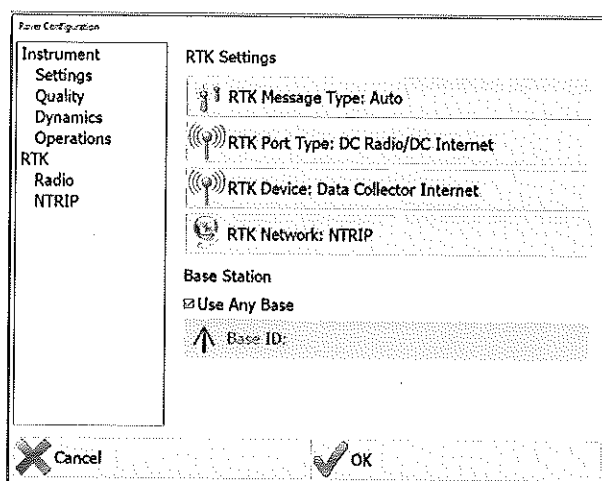
Quick Start (deprecated) - For use with manufacturer specific DGPS Solution

Calibrate Baseline (deprecated) - For use with ProFlex Lite Duo only.

Slope Sensor Filter - The internal slope sensor of the Vx6 can be dampened here if needed. This is a hardware filter for the internal axial sensor. The range is from 0.000 to 1.000 with 1.000 equaling NO dampening and 0.000 equaling 100% dampened. **Note:** only available when using a Vx6.

FTP User, Password - For use with MC-I4 Network Driver only. Input Username and password for the MC-I4 FTP server. The software will then send the .GC3 file needed by the receiver from the current project.

RTK



RTK Message Type - Type of correction the receiver will use. Options: Auto (monitors RTK type and sets the receiver to the correct type (receiver specific)), CMR, CMR+, RTCM 2.3, RTCM v 3.x, proprietary

RTK Port Type: Communication port for the RTK device. Options: Internal, Bluetooth, DC Radio/DC Internet.

RTK Device - Select an RTK device such as a Microhard L400 UHF Radio, Pacific Crest ADL, Data Collector Internet (If network corrections are being used).

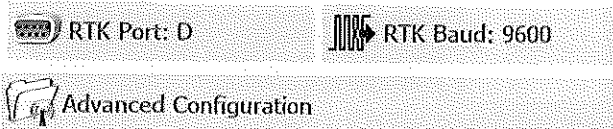
RTK Network (DC Internet only) - Select the network correction method. Different menus will be presented based on your selection and will be detailed individually below.

Use Any Base - Uncheck this box and enter in a base ID if there is a specific base station from a network of bases that the receiver needs to receive corrections from.

Radio

Note: This section deals with the Radio menu when a physical radio is being configured. For Network Settings see the sections below.

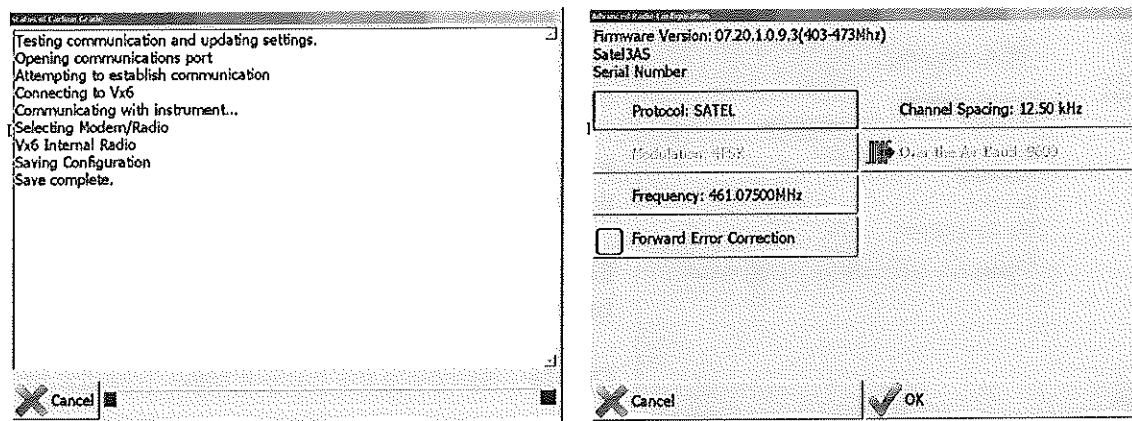
Radio Settings



RTK Port - This is the port on the radio that will be sending corrections. See Radio manufacturer documentation.

RTK Baud Rate - This is the rate at which the radio will be sending corrections. See Radio manufacturer documentation.

Advanced Configuration - This takes you to a menu where you can adjust settings on the radio. When pressed LandfillGrade™ will attempt to connect to the radio with the parameters currently set. This menu will vary between manufacturers. Connection to the Vx6 Internal Radio is shown below.



Protocol - Radio communication type

Channel Spacing - Broad or Narrow Band

Modulation - RF setting for radio communication. 2FSK or 4FSK

Over the Air Baud - Rate for RF communication.

Frequency - Sometimes in a Channel table, this is the frequency set for RF communication.

Forward Error Correction - A technique used for controlling errors in data transmission over unreliable or noisy communication channels. Needs to be set the same on both transmitting and receiving radios.

TCP/IP Direct|UDP/IP Direct

TCP/IP Direct is a direct connection on a network to a base station. UDP/IP Direct is similar except there is no connection to the base station. The base station will “fire and forget,” meaning the corrections will be broadcasted to the machine but transmission will not be verified.

When Direct is chosen, all of the **Radio** settings will be ghosted.

Press **Add** to add a new base to connect to. The program will take you to another menu (below) where you can enter the parameters for the base station.

If multiple bases are entered, you can scroll through them by pressing the **Base** button.

Edit - Sends you to the menu to edit the current base parameters

Delete - Removes the current base from the list.

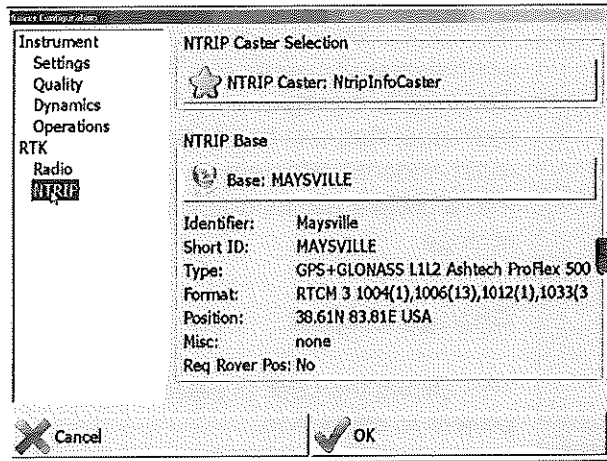
Name - A name for the base station. This does not affect the connection.

Host/Port - IP or URL address and port of the base station.

Send Rover Position - Some bases require the rover position to be sent back for a connection to be valid. Select this option to enable this.

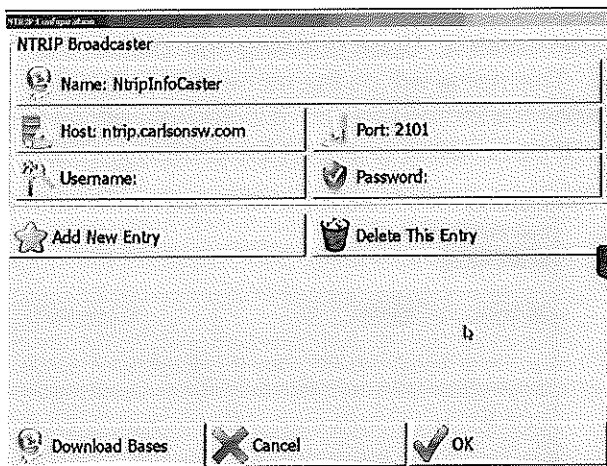
NTRIP

NTRIP stands for 'Networked Transport of RTCM via Internet Protocol' and uses connection to a server that connects with base stations to transmit corrections.



Press **NTRIP Caster** to connect to an NTRIP server.

Then you can cycle through the available base stations by pressing the **Base** button. As you cycle through base stations, the information for those base stations will appear in the window below the button.



Name - Enter the name of this server connection.

Host/Port - The IP or URL address and port of the ntrip server you are connecting to.

Username/Password - the credentials to log into the NTRIP server.

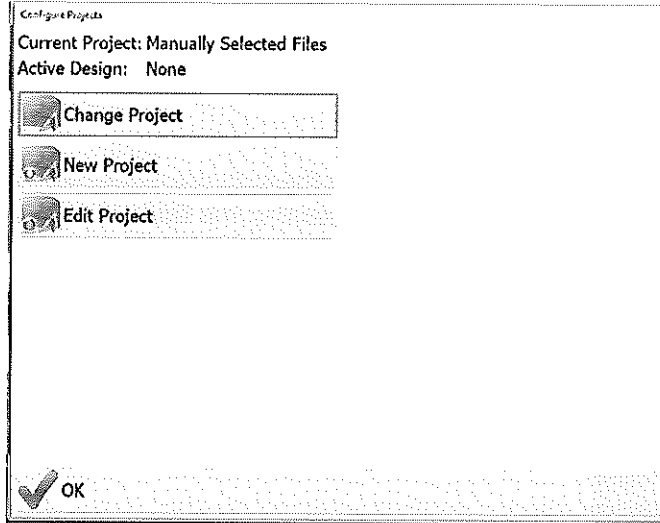
Add New Entry - Adds a new NTRIP Caster. When more than one Caster is entered you can scroll through them by pressing the **Name** button.

Delete this Entry - Removes this NTRIP

Caster from the list.

Download Bases - Once all of the information on the page is entered, press this button to download the list of Base stations from the server. LandfillGrade™ will contact the server and if the connection is successful you will be able to select from the list of base stations on the main Configure Rover page. Press **OK** to return.

Configure Projects



A project is a collection of files such as: plan view, design DTM, and localization, as well as optional files such as: centerline and coordinate files.

Technically a project is optional since individual files can be loaded independently. However, organizing files into a project allows quick and easy change.

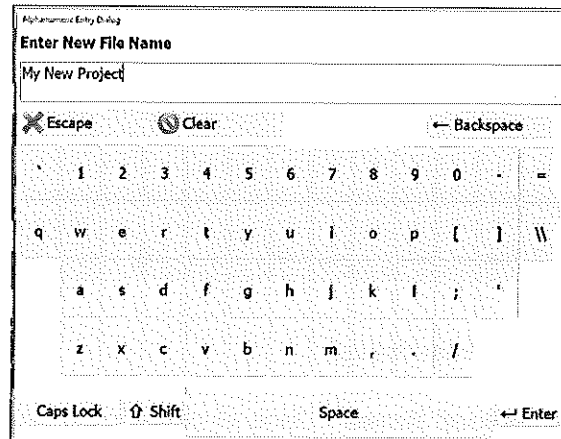
Change Project

This allows the user to select a new project to change to.

New Project

New Project allows the user to create a project from scratch. Upon pressing new project the user will be prompted to give the Project a name. This name will be the name of the .PRJ file created for this project. A .PRJ file is a configuration file for the project. It does not contain the individual files needed for the project to function. If you choose to export the project a .PRZ (Project ZIP) will be created containing the .PRJ and all associated files.

Next you will get a menu with sub-sections in a list on the right, and entries and options on the right.



Project Files

The actual plan view, surface, coordinate and other files that will be a part of the project

Edit Project

Project Files
Project Block Model
Project Options
Coordinate System
Notes


Plan View File: 1648431FD - FL Phase 1 Top of Waste


Design Surface: 1648431FD - FL Phase 1 Top of Waste


Existing Surface: demoLFS.grd


Warning/Other Surfaces: 0


Coordinate File: C:\Data\example.gpt


Guideline File:


GeoTIFF File:


Cancel

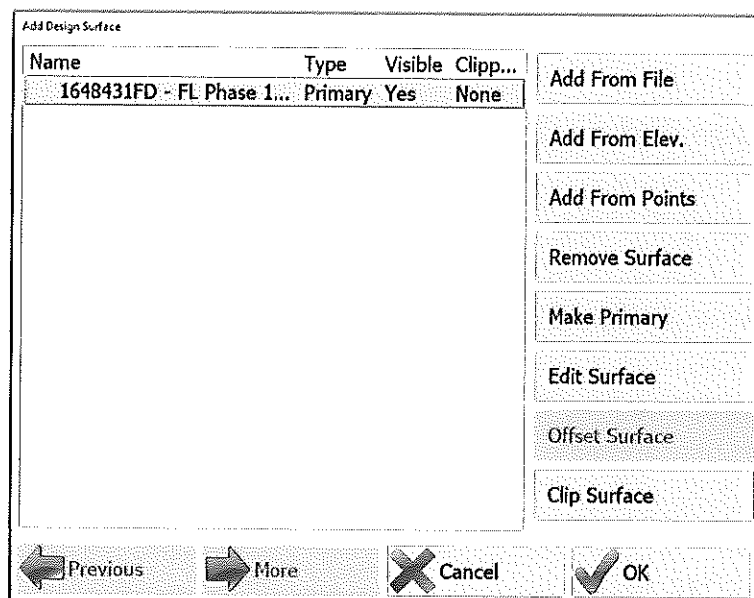
OK

Plan View File:

LandfillGrade™ will read DWG and DXF files as the plan view file directly. It will also use PLN files created in Carlson Software office products such as SurvCadd, Takeoff, Carlson Survey, Leica Site Manager and TopSite. Whatever colors appear on the source file will appear on the file within LandfillGrade™. However, bold linework will be presented at standard width. Text may appear on the screen in LandfillGrade™. If a DWG file is used, only the polyline elements on the file will be captured by LandfillGrade™. It is recommended that files be simplified before loading into LandfillGrade™.

To select a file or files click the **Plan View File:** button on the right. This will take you to a selections screen. Pressing add will take you to the file browser screen where you can select already existing files from the hard drive or navigate to a USB drive to select from there. You may add as many plan view files as desired. To remove them from the list, select them and press **Delete**. Press **OK** to accept the selection.

Design Surface

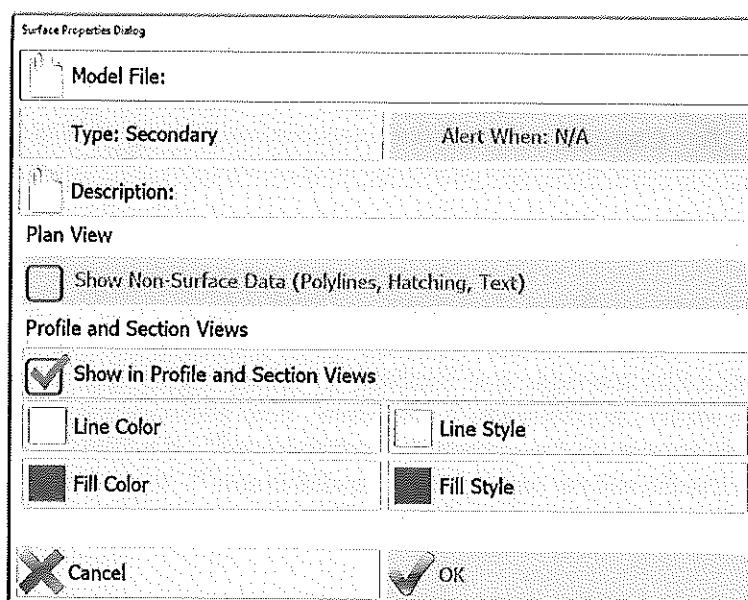


The **Design** surface is the primary surface that the machine will be grading to. In LandfillGrade™ this surface is usually the Top of Waste design or TOW. In some cases the site may choose to use intermediate designed slopes as the primary design, or a dozer might use a cell design or road design.

There are several options on how to select or create a primary design surface.

Add From File - This allows you to select a design surface from a file. LandfillGrade™ supports .tin, .flt, .tn3, .ntr, .dwg(with 3D faces), .dxf(with 3D faces), .xml(LandXML), Carlson .grd, and .asc file formats as design surfaces.

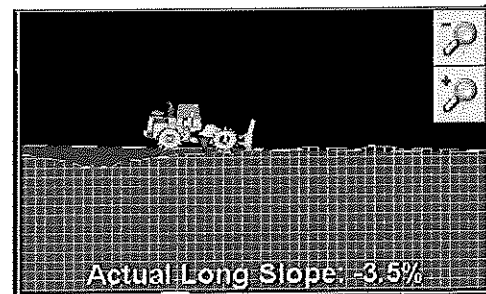
When you add the first surface the **Type** will be set automatically to **Primary**, and any surfaces you add after that will be set to **Secondary**. **Primary** means that this will be the surface that loads by default. When loading the primary surface the description will be set automatically to "Design Surface."



Plan View - Show Non-Surface Data (Polylines, Hatching, Text) allows you to use any non-surface data from the loaded file as you planview. This option only works for .dwg, .dxf and LandXML files.

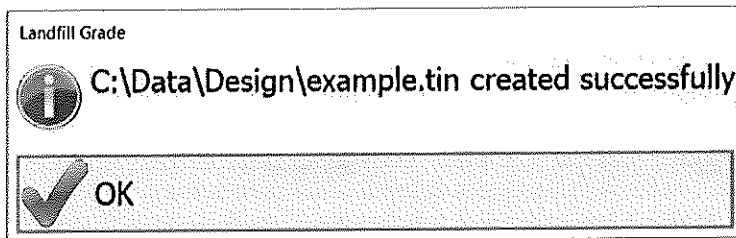
Profile and Section Views sets up the surface's style of display from a horizontal view.

- Show in Profile and Section Views toggles the surface on or off in those views.
- Line Color is the color of the line showing the top of the surface.
- Line Style is the type of line (solid, dotted, dash-dot, or dashed).
- Fill Color will set the color of the area under the surface.
- Fill Style will set the type of fill (solid, diagonal lines, cross-hatched, diagonal cross-hatch, or horizontal lines)



Add from Elevation - This option allows you to set a flat pad at an elevation as your primary design surface.

Add From Points - Choose a .gpt or .crd file to convert to a triangulated surface (.tin). You will be prompted first for the points file, and then to enter a name of the .tin file to create. It will then be added to the list of surfaces.

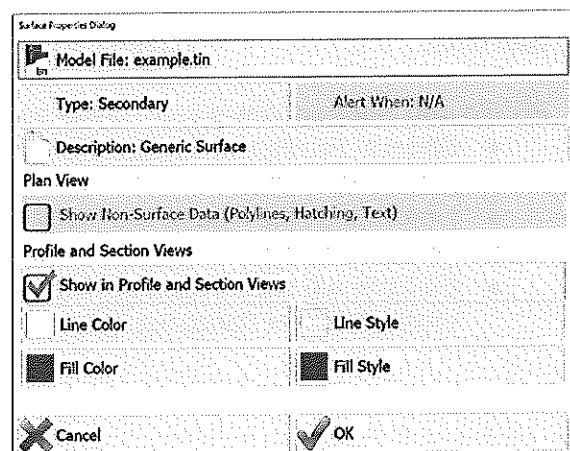


Remove Surface - Removes the selected surface from the list.

Make Primary - Sets the currently selected surface as the primary, and removes that distinction from the previously set primary surface.

Edit Surface - This will open the edit screen similar to the **Add From File** where you can change the attributes of the selected surface.

Offset Surface - This feature allows you to offset



a .grd file vertically by a set amount.

Clip Surface - Clip surface takes the currently selected surface and then prompts you for a surface to clip. Clipping means that the selected surface will not go outside the bounds of the surface to clip to.

Existing Surface

The existing surface is the surface that is updated locally by the movement of the machine. This file must be a Carlson .grd format.

Load Surface From File - This allows you to select an existing file.

Type and **Alert** are ghosted because they do not apply to the existing surface.

Description is defaulted to "Actual Surface." You can change this by clicking the button; however, this does not have any effect on the function of the program.

Save Passcount and Compaction Data This option turns on the feature for showing compaction and pass counts in the plan view.

Surface Properties Dialog

Model File: demoLFS.grd

Type: Existing Alert When: N/A

Description: Actual Surface

☒ Save Passcount and Compaction Data

Profile and Section Views

☒ Show in Profile and Section Views

Line Color Line Style

Fill Color Fill Style

Cancel OK

Profile and Section Views sets up the surface's style of display from a horizontal view.

- Show in Profile and Section Views toggles the surface on or off in those views.
- Line Color is the color of the line showing the top of the surface.
- Line Style is the type of line (solid, dotted, dash-dot, or dashed).
- Fill Color will set the color of the area under the surface.
- Fill Style will set the type of fill (solid, diagonal lines, cross-hatched, diagonal cross-hatch, or horizontal lines)

New Surface From Active Design - This will create an existing surface using the bounds of the active design surface for the bounds of the existing surface.

The top of the page show the design surface that will be used for the creation of this grid surface.

Create - Choose the type of creation for the existing surface.

- **Null Grid** - This will create a grid surface with no elevation values. This is the best option for an existing surface as the machine will fill in the the values as it travels over the terrain.
- **From Elevation** - This will create a flat pad at the elevation entered
- **From Design** - This will create an offset of the design surface.

The screenshot shows a dialog box titled "CreateSurfaceDialog". Inside, it states: "This will create an actual surface from the current design surface." Under the "Design Surface" section, it lists "Surface Name: 1648431FD - FL Phase 1 Top of Waste - 3DFaces.dwg" and "Size on Disk: 815,925 Bytes". Under the "New Surface" section, there are three rows: "Create: Null Grid", "Offset: N/A", and "Grid Spacing: 3.50'". Below these, it shows "Number of Cells: 100,725" and "Total Area: 1,225,926.10". At the bottom, there are two buttons: "Cancel" with a red X icon and "Create Surface" with a green checkmark icon.

The bottom of the page shows how many cells will be in the created grid and the area it will cover.

No Existing Surface - This will unload any files currently loaded into the project for the existing surface.

Warning/Other Surfaces

The Warning/Other surfaces allow you to load as many surfaces as needed into the project. The loading Screen is the same as for the Design and Existing Surfaces. When selecting a file to load the type of surface becomes more important.

Types

- **Warning** - This is a surface that can be used to alert the operator when the machine is above or below the elevation of the surface. A warning will create a pop up button for the operator to acknowledge, and sound an alarm when available.
- **Watch** - Like the Warning this surface can alert the operator; however, it only produces a flashing red **Caution!** in the status bar.

Project Options

- **Project Description** - This is a user defined description. It appears on the status bar of the main page and can be used to differentiate between different areas.
- **Units** - U.S. Survey Feet (0.3048006096 m), International Feet (0.3048 m), Meters (International System of Units)
- **Vertical Offset** - Enter a value that the design surface will be offset. Example: dirt fill on Top of Waste design.

Coordinate System

This tab is where the installer will upload the localization file and choose a projection. After a localization file and projection has been selected, there will be no more need to enter this dialogue unless the equipment is moved to a new site.

- **Projection** - A projection is any method for representing a sphere (or any three dimensional object) onto a plane. Projections can be global such as UTM (Universal Transverse Mercator) or local such as United States/Texas/(North). Click on Projection and choose the correct coordinate plane for the job site. **Note:** New projects will

automatically use the last projection selected.

- **Projection Options** - Enter a Geoid file, transformation files, or anything else applicable to the projection.
- **Localization File** - Upload a localization file in this dialogue or create one using the following instructions.
- **Localization Editor** - This allows an advanced user to manipulate the localization file for the project. See details below.

Localization Editor

When you select the localization editor it will give you the option to edit the Parameters or the Points. Choose **Yes** to edit the parameters, and **No** to edit the points.

PDGrade

 Enter Localization Parameters instead of points?

 No  Yes

For Parameters, you will be able to edit:

- Horizontal
 - Origin North
 - Origin East
 - Translation North
 - Translation East
 - Rotation
 - Scale Factor
- Vertical
 - Origin North
 - Origin East
 - Slope North
 - Slope East
 - Vertical Translation

Localization Parameters

Horizontal	Vertical
Origin North: 0.00'	Origin North: 0.00'
Origin East: 0.00'	Origin East: 0.00'
Translation North: 0.00'	Slope North: 0.000ppm
Translation East: 0.00'	Slope East: 0.000ppm
Rotation: +000°00'00.0"	Vertical Translation: 0.00'
Scale Factor: 0.00000000	

 Cancel  OK

Alignment Editor

Local Coordinates
 Raw Coordinates

P/ID	Use H	Use V	HRes	VRes	Northing	Easting
Point 1	Y	Y	0.08	0.00	1576982.28'	498939.
Point 2	N	N	559.2*	445.2*	1573446.26'	500548.
Point 3	Y	Y	0.06	-0.03	1575055.75'	499955.
Point 4	Y	Y	0.01	0.02	1573514.39'	499442.
Point 5	Y	Y	0.07	0.00	1577322.41'	500679.
Point 6	Y	Y	0.00	-0.00	1573998.01'	500187.

Add...
 Edit...
 Delete
 Save Copy

Previous
 More
 Cancel
 OK

The localization editor has two tabs. **Local Coordinates** and **Raw Coordinates**. Press **Add...** to add a new point to the localization. You will be prompted to enter a local coordinate, or select one from a points file (.CRD). Once you have a local coordinate entered, you will be prompted to collect a Raw coordinate from the GPS. You can also **Edit** and **Delete** points from the list. You can also select **Y** or **N** for each point to decide whether or not to use it in the solution. Press **Save Copy** to save the localization to a file (.LOC).

Note: A new localization can be created with Grade Supervisor, SurvCE/PC, or Topcon pocket 3D (gc3).

Edit Project

Edit project allows you to select an existing project and open it for editing. For description of menu see New Project above.

Options

Surface Options

Surface Options is where the LandfillGrade™ most landfill specific features can be configured. This controls the coloring of the surface to help the operator know the material they are working is compacted.

Note: The menu and options for the sections described here will be detailed in the sections below.

Surface Options

Show in Plan View: Compaction Opacity: 100.0%

Cut Fill Options Painting Options

Pass Count Options

Compaction Options

Layer Thickness: 2.00'

Surface Update Options

Update Existing Surface: Off Surface Write Interval: Off

+ Update Surface At: Wheels

Cancel OK

Show in Plan View - Choose the type of surface display colors from the options.

Opacity - Reducing the opacity of the coloring from 100% will make them increasingly more see-through.

Cut Fill Options - Cut fill is the setting for seeing where your position is in relation to the loaded design file.

Painting Options - Painting is an optional version of cut fill coloring that uses the width of the machine and pixels to color. It is less

representative of the true state of the existing surface but can provide a cleaner presentation for the operator.

Pass Count Options - Pass counts show the number of times the machine has gone over the surface in any given location.

Compaction Options - Compaction is a coloring of the surface showing the deflection of the surface from the last pass.

Layer Thickness - This is the amount of vertical offset up of the **Flat Pad** or **Slope** when the **New Layer** button on the toolbar is pressed.

Cut Fill Options

Cut/Fill At - What point on the machine LandfillGrade™ will use to give the operator the Cut/Fill Number.

- Under GPS - The exact point on the ground under the GPS antenna
- Right, Left, Center Blade - The point under the blade based on the offset of the antenna
- Front Left/Right Wheel - Used when you want to check a specific point you can only get one wheel to.
- Front Center Axle - Center of the machine on the ground under the front wheels.

Cut/Fill Options

Cut/Fill At: Under GPS

☐ Show Cut/Fill at Left & Right

Dot Size: 1.50'

Cut/Fill Options

Cut/Fill Look-Ahead Distance: Off

Cut/Fill Tape Scale: Tenths

.00
→.0 Number of Decimal Places: 1

Cut Fill Grade Tolerances

Cut Fill Tones

Cancel OK

Show Cut/Fill at Left and Right - When enabled LandfillGrade™ can give two cut/fill numbers based on the GPS, the tilt sensor and the width of the machine.

Dot Size - The size of the icon on the planview that indicates the position of the cut/fill point.

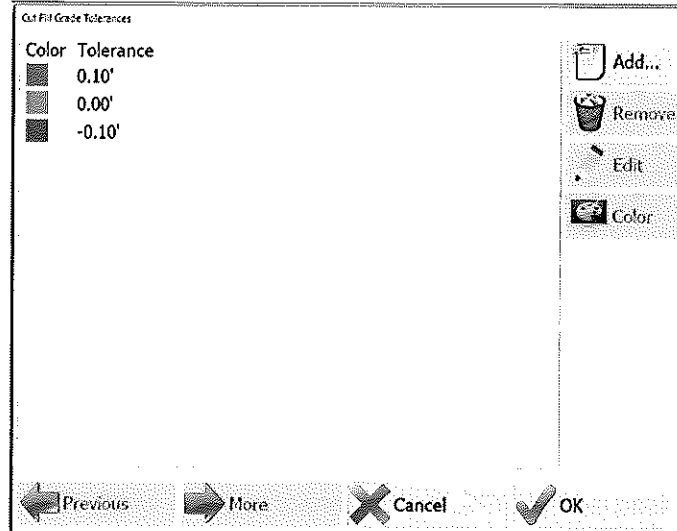
Cut/Fill Look-Ahead Distance - Optional distance to project the cut/fill position in front of the machine. Use with caution, as noise from sensors and readings is amplified the further it is away from the original point.

Cut/Fill Tape Scale - The scale the tape will show. Options: Tenths (of a ft.), Feet, or Hundredths.

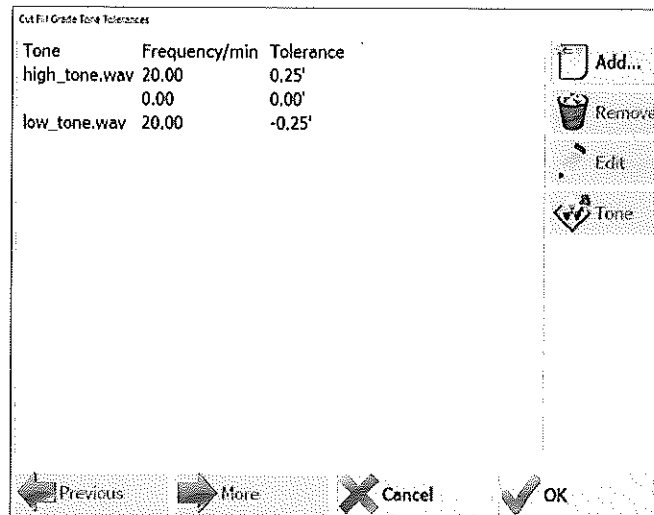
Number of Decimal Places - The number of decimal places to show cut/fill to in the main screen.

Cut Fill Grade Tolerances - This is where you can set up different colors to represent different things in comparison to grade. The most common setting is to create a band of green for "on-grade" by making a value above grade red for "cut" and a value below grade (a negative value) blue for "fill." This will give the familiar cut and fill colors seen by default in the main Grade screen. Any number of colors at different values can be set above and below grade. Anything within those values will show the on-grade color. Press **Add** to set a new level. Select an existing level and press **Remove** to delete, and **Edit** to change the value. **Color** will allow you to edit the color of the existing level.

This menu is identical to what you will see in **Configure Projects**. This one will act as a default in the case of not having a project. Any changes made here will also change the current project, and vice versa.



Cut Fill Tones - Cut Fill tones work much like the colors. These are audible tones that can be played when the machine's GPS position is above or below grade. Press **Add** to set a new level. Select an existing level and press **Remove** to delete, and **Edit** to change the frequency and tolerance values. **Tone** will allow you to select a .WAV sound file from the hard drive or a USB drive.



Painting Options

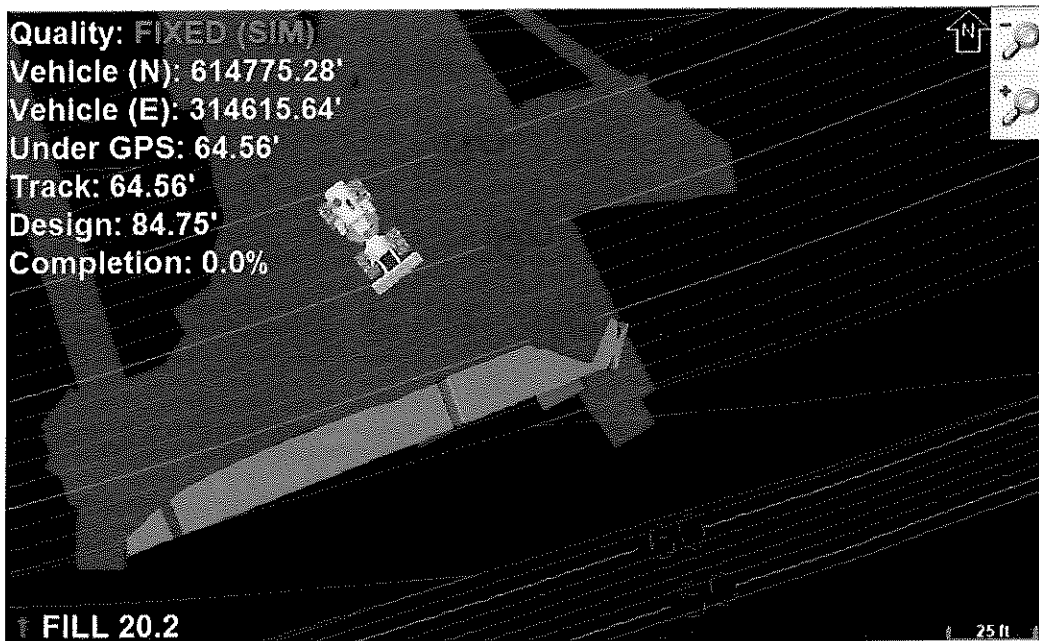
Painting Options

Cut Fill Surface Painting Options

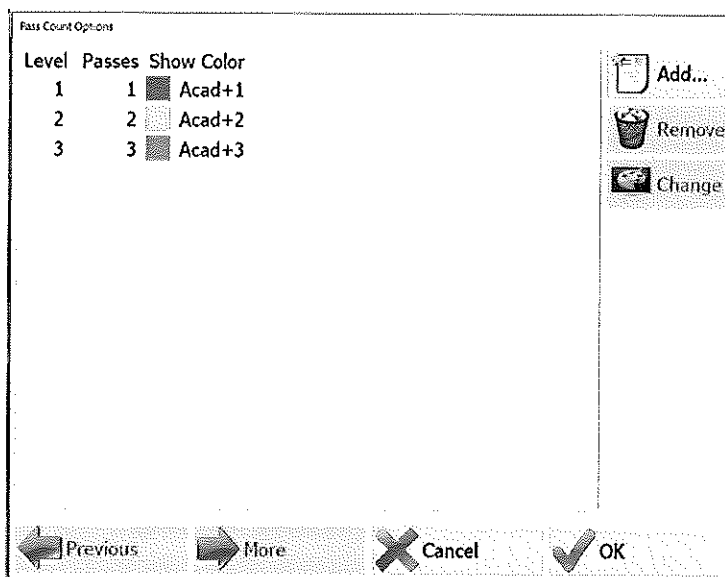
☒ Paint Cut Fill in the Background

Clear Cut Fill Painting

Normally, LandfillGrade™ will use the cell of the grid file (.grd) to color map the screen on cut/fill, compactor, or pass counts. When enabled, the Painting feature will use the width of the machine in pixels to make a smooth paint stroke of color where the surface was as it crossed over it. This will interpolate some distance between the grid nodes, but may provide a better visual for the operator to follow. This will currently work for only cut/fill color mapping.

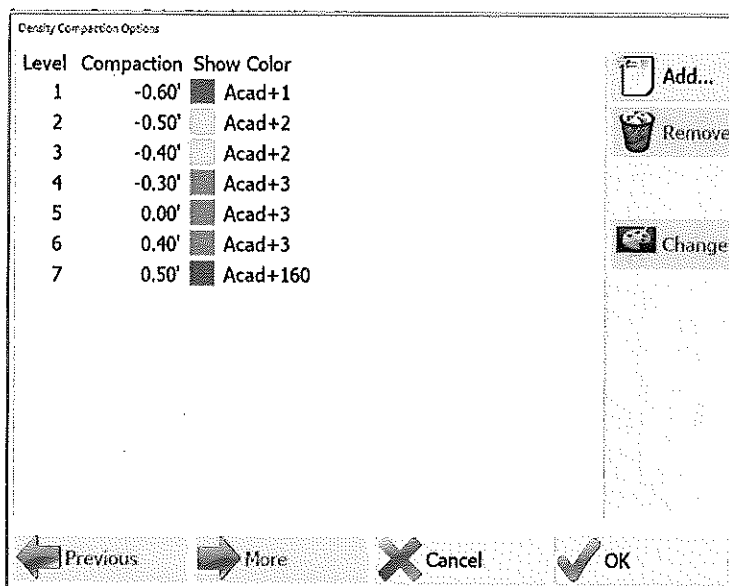


Pass Count Options



Pass counts show how many times the machine has gone over any point on the plan view. Here you can add as many passes as desired to reach optimum compaction. Add more passes with the **Add** button and delete with **Remove**. Selecting a pass level and clicking **Change** will allow you to set the color for that number of passes.

Compaction Options



Compaction Options work similarly to pass counts but are a little more complicated. Each level represents a change in elevation from the last pass of the machine. The goal is to have the color turn green when no more deflection in the surface is detected. The defaults have been developed with many hours of use at various landfills in collaboration between Carlson and landfill personnel. It uses an envelope of -.3' to +.4' to be green. This means if the surface only moves slightly between passes it should be considered good. If it moves down more than that, yellow or red to indicate it is

not compacted. If it moves up more than that it turns blue to indicate that more waste has been added. Add more levels with the **Add** button and delete with **Remove**. Selecting a level and clicking **Change** will allow you to set the color for that setting.

Surface Update Options

Update Existing Surface - Choose how LandfillGrade™ will update the surface. For most applications, it should update the surface for cut and fill. This means it will cause the surface elevation to go up and down. You can turn surface updating off completely, or you can choose cut only. This setting is mostly for excavator type vehicles.

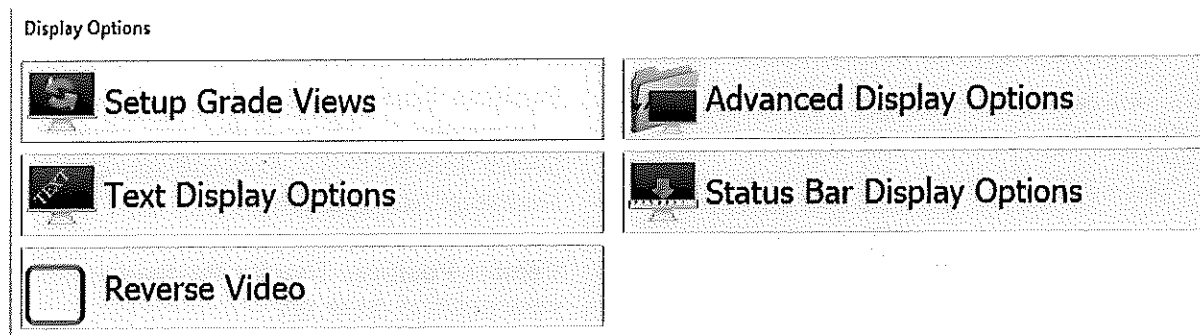
Surface Write Interval - During normal operation, LandfillGrade™ loads surface into memory and updates it, only writing it to the disk when Grade closes. This determines how often Grade should write out the surface on a regular basis to prevent possible data loss from a hard shutdown.

Update Surface At - Similar to **Cut/Fill At**. This is from what point(s) on the machine will update the surface.

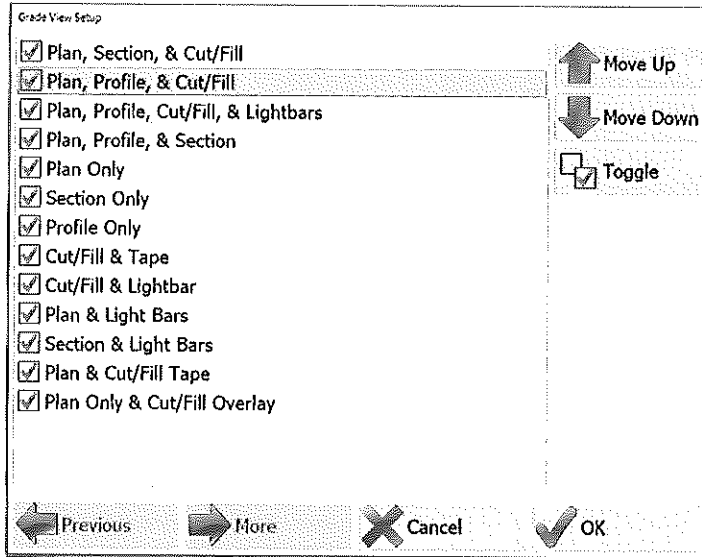
- Under GPS - The exact point on the ground under the GPS antenna, plus the width of the machine.
- Right, Left, Center Blade - The point under the blade based on the offset of the antenna plus the width of the machine.
- Wheels - All four wheel widths will be used.
- Front Center Axle - Center of the machine on the ground under the front wheels.

Display Options

LandfillGrade™ was built for simplicity in the user interface while still having the ability to be completely customizable. The most common configurations are set as default and any special requirements for display can often be set by the installer or even the operator.



Setup Grade Views

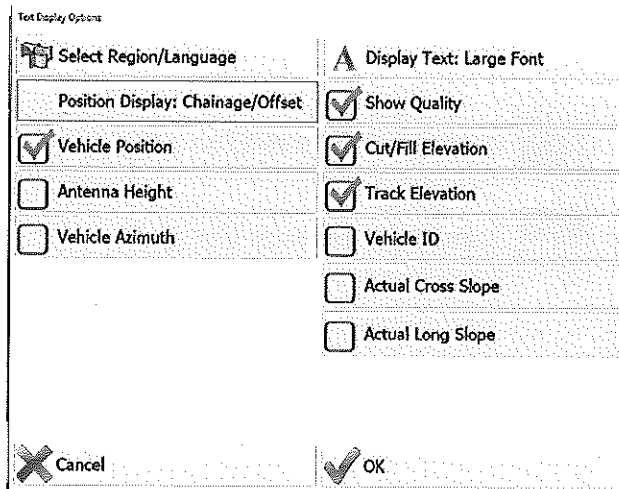


Here you can select what views are available to the operator, and in what order they appear in the Views button on the Toolbar.

Select a view and press the **Up** or **Down** arrows to re-order. Select and press **Toggle** to turn them on or off.

Text Display Options

Choose the language that LandfillGrade™ will use as well as which information is displayed on the plan view.



Select Region/Language - Choose from available translations.

Position Display: Orders the local coordinates displayed in the main view. Select from Northing, Easting|Easting, Northing|Chainage/Offset.

Vehicle Position: Toggles the the main view position on or off.

Antenna Height: Toggles the main view text for the antenna offset from the ground on or off.

Vehicle Azimuth: Toggles the main view text for the direction of travel on or off.

Display Text: Sets the font size for text.

Show Quality: Toggles the main view text display for the GPS quality on or off.

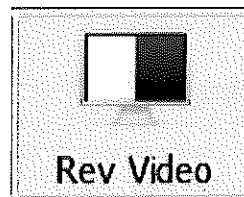
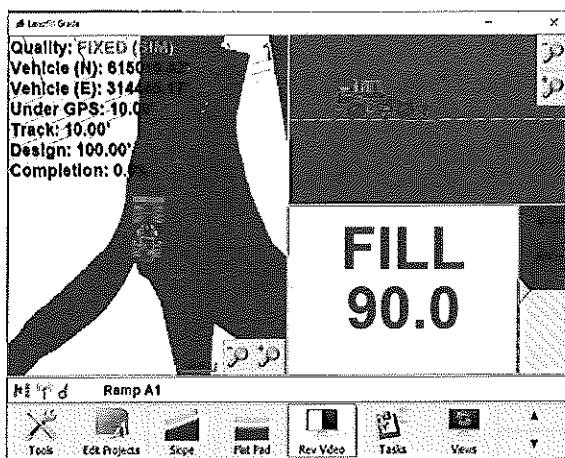
Cut/Fill Elevation: Toggles the main view text display for the Cut/Fill on or off.

Vehicle ID: Toggles the main view text for vehicle ID on or off. (Deprecated with streaming)

Actual Cross/Long Slope: Toggles the main view text display of the pitch and roll of the machine on or off.

Reverse Video

This changes the coloring of the monitor to make the screen easier to see in different light conditions.

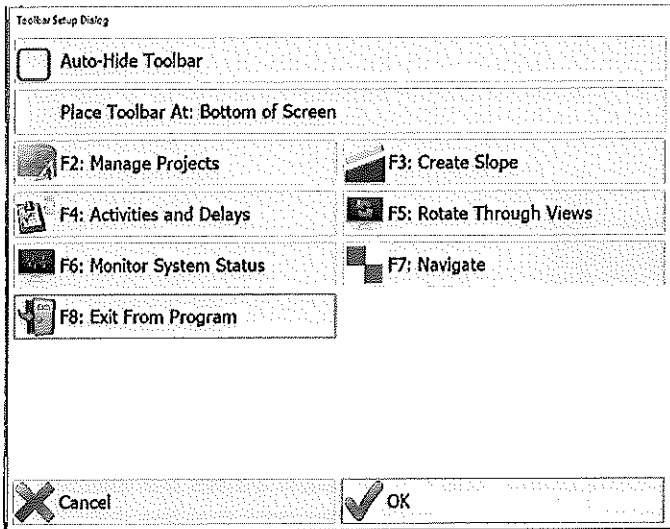


Advanced Display Options - TODO

Settings for manually configuring many specific details of the display.

Advanced Display Options	
 Toolbar Display Options	 Select Theme
 Set Custom Display Colors	 Vehicle History Options
 Plan Rotation: North Up	☐ Large Zoom Buttons
 Plan Rotation Angle: 0.0°	☐ Show Surface in Plan
 Station Format: 1+00	☐ Show Coordinate File in Plan
 Plan View Rate: 5 Hz	☐ Guideline Offset
 Show Slope As: Percent	☐ Show Bubble Level
 Centerline Arrows: Large	☐ Show Plan View Toggle
 Cancel	 OK

Toolbar Display Options - TODO

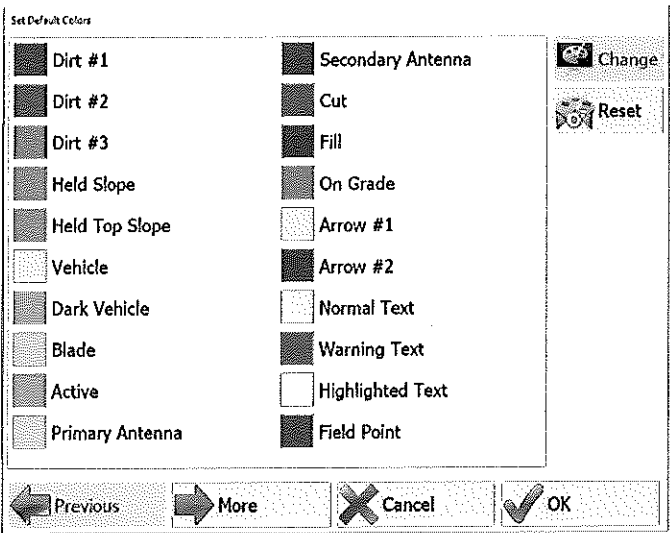


Auto-Hide Toolbar: When selected, the toolbar on the main view will collapse when not in use. Press the menu button to expand it for use.

Place Toolbar At: Select the position of the toolbar. The options are the top and bottom of the screen

Toolbar Buttons: The toolbar buttons are all configurable and assigned to the function keys F2-F8. Press the button and select the desired button to change them from the defaults.

Set Custom Display Colors



In this menu you can change the colors of nearly every item other than static icons. To select a new color, highlight the item you wish to change and then press the **Change** button. You will be given a list of available colors to choose from. Pressing **Reset** will restore default colors.

Plan Rotation: Choose which direction (North, 30°, etc.) is at the top of the plan view or choose "Moving Map" so that the azimuth of the machine is always facing the top of the map Plan.

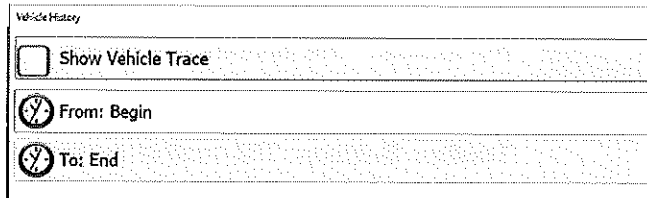
Rotation Angle: Enter the desired angle to be placed on top if applicable.

Plan View Rate: Choose the update rate of the plan view. This can be adjusted to improve performance on a control box with less resources.

Show Slope As: Percent, degrees, rise/run, run/rise

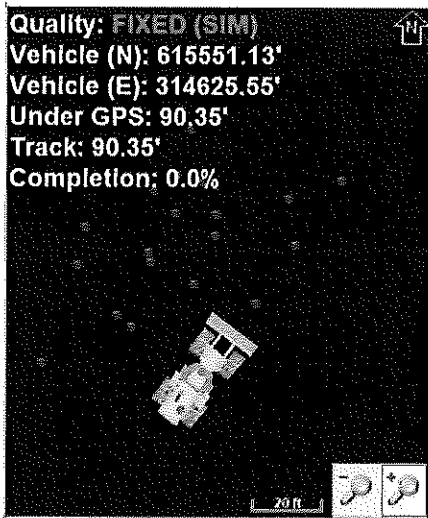
Select Theme: Choose a Windows theme

Vehicle History Options



The 'Vehicle History' dialog box contains three options:

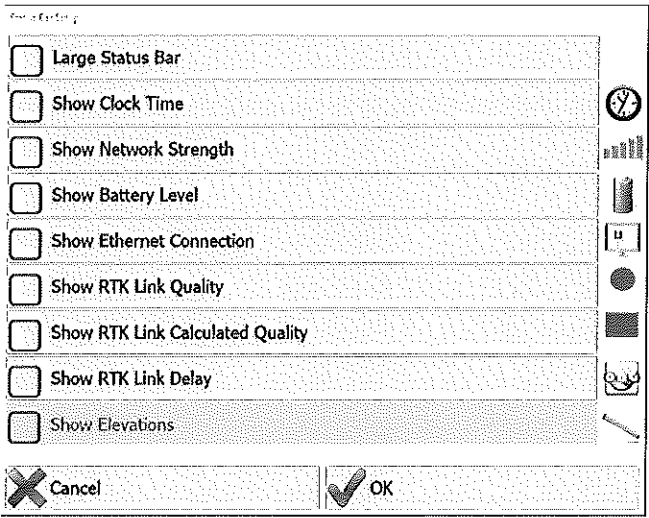
- ☐ Show Vehicle Trace
- ☒ From: Begin
- ☐ To: End



When selected, the machine will leave a trail of dots where it has already been. The **From** option allows the user to select an amount of time back from now that the dots will remain on screen. **Ex.** If you set it to two hours before, the dots for only the last two hours will remain on screen, and the rest will be deleted.

Large Zoom Buttons - Changes the size of the zoom buttons on the main screen to make them easier to press.

Status Bar Setup



The status bar can be setup to provide extra information at a glance. The following options can be show along with the default info:

- Large Status Bar
- Show Clock Time
- Show Network Strength
- Show Battery Level
- Show Ethernet Connection
- Show RTK Link Quality
- Show RTK Link Calculated Quality
- Show RTK Link Delay
- Show Elevations

Large status bar with all options selected:



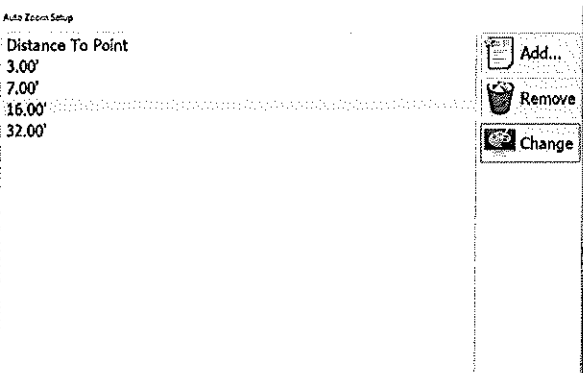
TODO: Replace Image

Navigate Options

Show Attribute in Plan: None, ID, Desc, ID & Desc - Adds the information on the plan view for the piles.

Auto-Zoom to Target - As the machine approaches the point, the screen will automatically zoom in based on configured tolerances (For Example: the software can be setup to zoom once when the machine is within 10 feet of the target and then again when the machine is within 5 feet of the target).

Auto Zoom Setup - Distance To Point and levels of zoom.



Press **Add...** to add a new auto zoom level. You will be prompted to add a new distance

from the point. You can also edit the existing distances by pressing **Change**.

When the hammer gets within the distance to the point, the plan view will auto zoom to that scale.

Project Options:

Advanced Project Options

Project Desc:

Units: US-Survey Feet ☐ Positive Vertical Offset

Offset Increment: 1.00'

Steering Tolerance: 0.10'

Vertical Offset: 0.00'

Distance Decimal Places: 2

Angle Decimal Places: 1

Slope Decimal Places: 1

☒ Cancel ☒ OK

Project Desc - Here you can set the project description that will appear in the toolbar

Units - You can change the units for the projects here.

Vertical Offset - TODO

Tolerances - TODO

Distance/Angle/Slope Decimal Places - How values for each item will be displayed to the operator.

Positive Vertical Offset - TODO

Report Options:

Logo - Add an image file here of your company logo and it will be added to reports when saved as a PDF.

System Options

Communication Options

Communication Options

☐ Enable Heartbeat ☒ Heartbeat Settings

☒ Enable Streaming ☒ Streaming Settings

☐ Local Logging ☒ M2M Settings

☒ Logging Tolerances

☒ Show Other Rovers

☒ Store Point At: Hammer

☒ Cancel ☒ OK

Enable Heartbeat (deprecated) - Heartbeat is the protocol for data transfer that has been replaced by streaming as of the writing of this manual. The functionality has been left in to facilitate backwards compatibility.

Enable Streaming - Streaming is the protocol for communicating data from LandfillGrade™ to Carlson Command. Streaming data includes the position information as well as all time events such as Operator login, activities, delays, and down codes. This does not include the Pile information.

LandfillGrade™ Reference Manual

Data is streamed directly to the Carlson Stream Server as long as the connection is valid and connectivity is strong enough for packets to get through. In the case that connectivity is broken, streaming logs will be created in:

[data path]\logs

with the format:

DBStreamServer_[uniqueID].smcback

One file will be created for each session of LandfillGrade™ and will be cycled at midnight UTC. As soon as connection is restored the oldest data will be streamed until the stream catches up with the current time. Once data is streamed in the .smcback files will be removed.

Local Logging - When enabled LandfillGrade™ will write all position and time event data to a local log in:

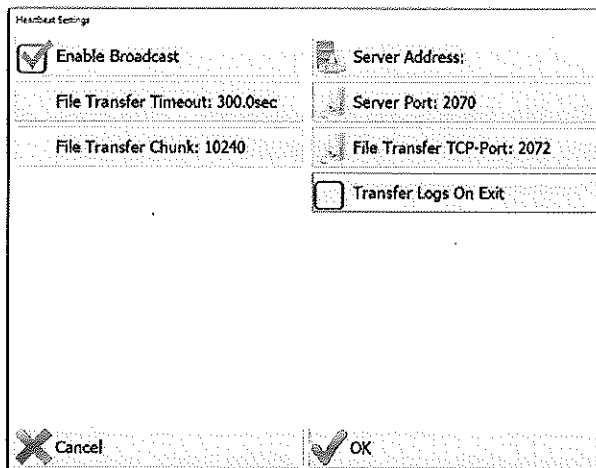
[datapath]\logs

with the format

log-[ID]-YYYY-MM-DD.log

These logs can be used to manually transfer data back to Carlson Command.

Heartbeat Settings (deprecated)



Enable Broadcast - This determines whether or not LandfillGrade™ sends UDP Broadcasts of Heartbeats on the network. This feature will still work for showing other rovers on a local network.

File Transfer Timeout - The amount of time before a transfer is cancelled and tried again. This setting requires a Heartbeat server.

File Transfer Chunk - The amount of data sent in each packet. This setting requires a Heartbeat server.

Server Address - This is the address where

the Heartbeat server resides.

Server Port - This is the TCP/IP port LandfillGrade™ that will transmit and receive Heartbeat messages to or from the Heartbeat server. These are UDP messages. This must be the same port configured on the Heartbeat Server

File Transfer TCP-Port - This is the TCP/IP port LandfillGrade™ and the Heartbeat Server will use to transfer logging and project files between the LandfillGrade™ Computer and the Server.

Transfer Logs on Exit - This will force the log files to transfer back to Heartbeat before LandfillGrade™ will allow the control box to shut down. This should only be checked for legacy installs.

Streaming Settings

Streaming Settings

Server Address: appserver.carlsoncommand.com	
Company: carlson	Server Port: 2750
Rover Name: josh-mbp-pd	Local Port: 2750
Logging level: Debug info	☒ Encrypt Stream Messages

Server Address - The location on the network of the Stream Server. The Carlson Cloud location is:

appserver.carlsoncommand.com
for static cards and:
10.9.013
when using Carlson VPN

Server Port - This is the port the server is listening for streaming messages on. The Carlson Cloud Server listens on port 2750. This is the default.

Local Port - This is the port your machine will be listening on for all streaming

communications.

Company - The Stream Server can be configured to listen for many different sites. Setting a company allows different machines to stream into the appropriate site. This site name will be assigned if you are using the Carlson Cloud.

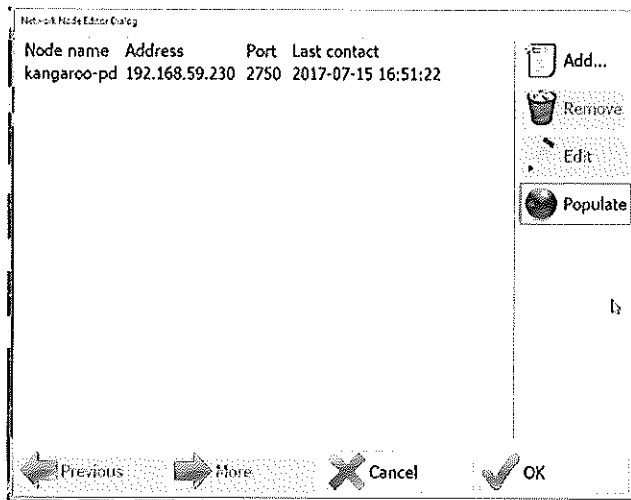
Rover Name - The is the unique name for your machine. This must match a rover name created for the company in Carlson Command.

Logging Level (Errors, Debug Info, Everything) - Activity on the connection to the Stream Server is logged. The amount of information logged has 3 different levels. For normal connections with no issues "Errors" is enough. If further troubleshooting is needed the level can be increased. This can cause the log files to get quite large. Once the issue is found this should be returned to errors.

Encrypt Stream Messages - When selected, this will encrypt all communication between the Stream Server and the machine. **Note:** May affect performance.

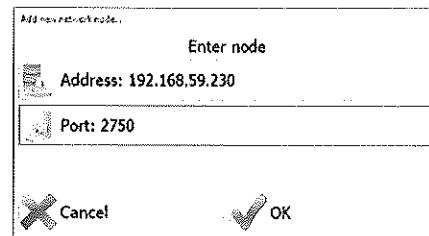
M2M Settings

LandfillGrade™ machines can be configured to share position data and surface information between each other with or without the Carlson Command back office. In this section you can configure them to communicate with each other.



Press **Add...** to enter a new rover to communicate with.

Enter the current IP address and the **Local Port** of the machine you want to communicate with.



When you press **Populate** your machine will attempt to communicate with the other machine, and will fill in the Node Name and Last Contact. The IP address can change after this with no issues.

You can also select the node and **Remove** or **Edit** the existing nodes.

Note: Removal of a node needs to be done while the machine is offline. If you remove a node, and that node is not removed from all other machines in the list it will be repopulated. A node must be removed from all machines.

Logging Tolerances

LandfillGrade™ records a position for logging and streaming as a series of conditions are met. Each time one of these tolerances are hit a position is logged or streamed.

Time Tol - Time in seconds e.g. Every 15 seconds a point will be recorded

Distance Tol - Distance in feet or meters

Elevation Tol - Elevation in feet or meters

Azimuth Tol - Azimuth change in degrees

Show Other Rovers

This setting when checked will show the other machines on your machine's plan view.

Store Point At

This setting sets the logged position location from a set of possible points

The options are:

- Wheels - Forward location of the GPS antenna offset to the center of the machine.
- Left, Right, Center Blade - Offset to the point on the blade on the ground.
- Tracks (True GPS) - offset from GPS to the ground (no center offset)
- True GPS - No offsets (including antenna height)

Sync Surface Every

In the machine to machine communication between machines, the existing surface is shared so all operators can see the progress in pass counts, cut/fill, compaction or painting. This setting determines how often the changes are synced between the machines.

Admin Password

The Admin password is a password to protect advanced levels of configuration in the software from operator use. This password is numeric only and must be at least 5 digits long. This blocks access to these menus:

- Product License
- Advanced Tools
- Project Options
- System Options
- Exit

User Password

The User password is a password to prevent the operator from leaving operational screens and accessing any configuration. This password is numeric only and must be at least 5 digits long. This blocks access to any menus other than what is on the toolbar.]

Prompt for Start Point

When checked Grade will prompt the user for a position to start the simulation. This is only used with GPS Simulation for demonstration purposes.

Password on Shutdown

If checked, the system cannot be shut down without a password

Allow Ignition Shutdown

This option will trigger a shutdown when triggered by ignition. This must be configured with the ignition wire of the machine. Consult the installer for more details.

Advanced System Options

Advanced System Options	
☐ Warning Tone	Save Operator Defaults
☐ Watch Tone	Load Operator Settings
☐ Tolerance Tones	Auto-Delay Time: Off
Proximity Warning: Off	☐ Load Defaults at Login
☒ Set System Time From GPS	☒ Shutdown on External Power Loss
☐ Enable System Debugging	RTK Latency Average Time: 60.0sec
☐ Enable CAN Debugging	☐ Require Activity
RTK Network Retry: 30.0sec	Shutdown Timer: 20sec
Time Between Retries: 120.0sec	
Cancel	OK

Warning Tone - This allows an audible tone to sound when the machine enters a warning zone. Warning zones can be created in CAD by making a closed polygon in on a layer called "warning."

Watch Tone- This allows an audible tone to sound when the machine enters a watch zone. Watch zones can be created in CAD by making a closed polygon in on a layer called "watch."

Note: Watch and warning Zone files can also be created in Carlson Command, and then added to the project.

Proximity Warning - This warns the operator about nearby vehicles. Streaming and M2M must be enabled in the UOA. Enter a time-to-collision with another vehicle.

Set System Time From GPS - This setting allows LandfillGrade™ to set the Windows system time from the time received in the messages from the GPS.

Enable System Debugging - This creates a debugging log that is used for testing and debugging purposes. This file can be found in [data:path]\Diagnostic and will be called \$debug[auto-incremented number].txt

Enable CAN Debugging - TODO

RTK Network Retry - This is the amount of time after an RTK network is lost that LandfillGrade™ will attempt to reconnect.

Time Between Retries - This is how long LandfillGrade™ will wait before between connection attempts.

Require Activity - Activities can be configured through Command and sent to machines to access in the Tasks button on the toolbar. If this setting is checked, LandfillGrade™ will always require the operator to enter an activity, delay or downcode before beginning work, closing the program, or shutting down.

Save Operator Defaults - Saves the current operator's settings to the default operator configuration file.

Load Operator Defaults - Loads the settings from the default operator configuration file.

Auto-Delay Time - The number of seconds of sitting idle LandfillGrade™ will wait before requiring the operator to enter a delay code.

Load Defaults at Login - Loads the default operator configuration at every login.

Shutdown on External Power Loss - This will trigger the operating system to shutdown if external power loss is detected. The operator will have 20 seconds to cancel the shutdown.

RTK Latency Average Time - This setting will allow LandfillGrade™ to calculate RTK latency averaged over the time period set. If latency is available in the GPS driver, that latency will always be used.

Shutdown Timer - How long after loss of ignition LandfillGrade™ will wait to shut down the operating system.

Change Project

This menu allows for the quick change of projects when the operator is entering a new location or a new task. This button is the same as the button located under Configure Projects inside of Advanced Tools.

File Utilities

Copy Project To Another Location - Select a project (.prj) from the Data directory and save it to another location. Save the project to a USB thumb drive by changing the drive at the top

Copy - Select a single file (a project is a collection of files) and save it in another location. Save a file to a USB thumb drive by changing the drive at the top.

Move - Select a file and move it to another directory.

Rename - Select a file and rename it.

Delete - Choose a file to delete.

Backup Settings - Choose which settings need to be backed up. LandfillGrade™ will copy the relevant configuration files and save a .zip file to C:\Data\Backups. Options available to backup are:

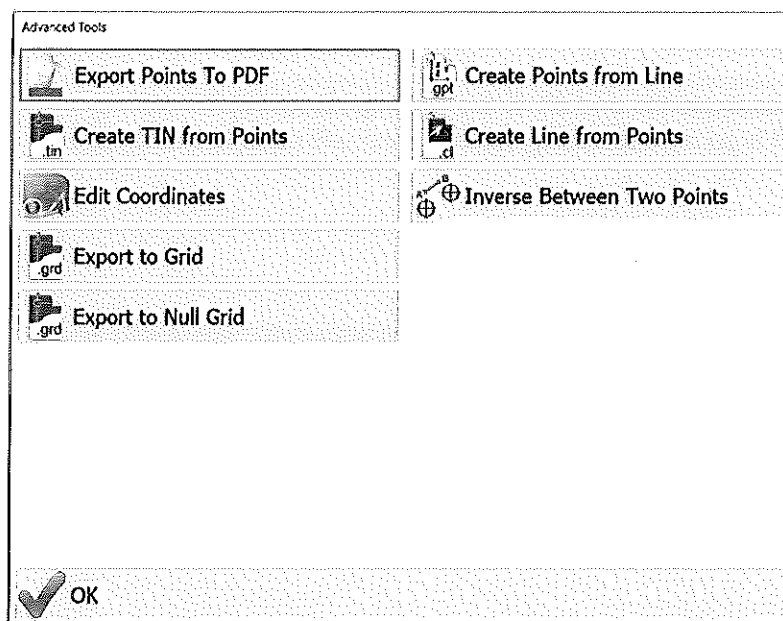
- Current Operator Settings
- Default Operator Settings
- All Operators' Settings
- User Projections
- Current Vehicle Settings
- All Vehicle Backups
- System Options
- Current GPS Settings

Restore Settings - Allows you to restore settings from previously created backup files. After selecting the backup .zip file you wish to restore from you will be prompted to select which groups of options to restore.

Transfer Log Files - This option will transfer the position log files to another directory and/or USB thumb drive. This is useful for transferring data to Carlson Command if a network connection is not available.

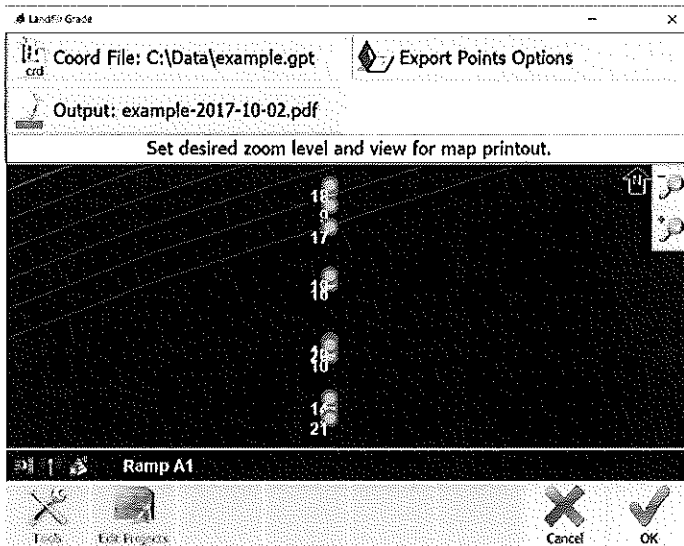
Save Diagnostics Files - Saves a diagnostic file useful for the Carlson development team for troubleshooting issues. This file will be saved to [data path]\Diagnostic\diag_[ID]_[YYYY_MM_DD].zip

Calculations - TODO



Calculations is a collection of useful tools for data manipulation within the LandfillGrade™ program.

Export Points To PDF



This will create a report in
C:\Data\reports

Coord File - Select the coordinate file to create a report from.

Output - Choose a name for the PDF. The default is today's date.

Show Map - Include a map in the report. The options are None, Portrait, and Landscape

Create TIN from Points

Stored points can be used to create a triangulation (.TIN) file for use as a surface. Select a points file to make a TIN from, choose a filename for the surface (TIN), and push OK.

Edit Coordinates

This will display all points in the coordinate file and allow the adding, removing, or editing of these coordinates. This is helpful if a point is stored by mistake and will need to be removed from coordinate file.

Export to Grid

Convert an existing design or surface to a grid file (.grd). File types supported are .DWG and .DXF with 3D Faces, .TIN, .GPT, .XML (LandXML), and .CRD.

Export to Null Grid

Create a null grid from the boundary of a design surface. A null grid is useful for starting as an

existing surface in a project.

Create Points from Line

This creates points from a polyline on the screen

- o Click on a polyline on the screen
- o Push "Make Points" and enter the distance between points on the polyline
- o Push "Flip Points" to start from the other end of the polyline

Create Line from Points

This routine creates a line from points

- o Select "Drive Points" to create points using a Store Points routine
- o Select "Load Points from File" to choose a points file.

Inverse Between Two Points

This routine calculates the inverse (horizontal distance, elevation distance, slope distance, and azimuth) between two points

- o Click on the screen to choose a point or,
- o Select points from a file or,
- o Choose current GPS position

Restore Settings

A quick link to restore backup settings in the **File Utilities** section.

Show Monitor Screen

This screen shows information pertaining to vehicle position, GPS status, sensors, and telematics information.

GPS

 Vx6	 Skyplot	 Dozer	 Communication	 M2M Position
Raw Position Info			Status Info	
Latitude: N38°38'50.8560"			Quality: RTK Fixed	
Longitude: W083°45'45.8240"			HDOP: 1.70	
Ellipsoidal: 392.39'			VDOP: 2.60	
Geoid: 0.00'			HRMS: 0.05'	
Orthometric: 392.39'			VRMS: 0.07'	
Visible SATS: 22			RTK Delay: 1.9 sec	
Used SATS: 5			Link Quality(CALC): 00.0%	
Local Position Info			Link Quality(GPS): N/A	
Northing: 3706089.94'			Baseline: N/A	
Easting: -240.15'			UTC Date: 2017-06-20	
Elevation: 124.6°			UTC Time: 20:25:55	
				
Qual: FIXED				

The GPS tab will have the name of the driver loaded on the tab. It contains all of the information, raw and converted by the driver, provided by the GPS receiver.

Raw Position Info

- **Latitude Longitude** - Raw horizontal position.
- **Ellipsoidal**
- **Geoid**
- **Orthometric**
- **Visible SATS** - Total number of GPS/GLONASS satellites visible in the sky
- **Used SATS** - Total number of

GPS/GLONASS satellites being used in the computed position.

Local Position Info

- **Northing/Easting** - Calculated local horizontal position.
- **Elevation** - Calculated local elevation

Status Info

Quality - Describes the precision of the position information

- **RTK FIXED** - RTK corrections being received and satellites combine to provide 1 cm accuracy. This state is critical for most operations.
- **RTK Float** - RTK correction being received, but a fixed solution has not yet been reached.
- **Stand Alone** - No RTK corrections.
- **DGPS, Differential float, WAAS, Etc** - No RTK, however a wide area correction is available which will improve the accuracy of the position.

HDOP - Horizontal dilution of precision

VDOP - Vertical dilution of precision

HRMS - Horizontal root mean square, a measurement of position accuracy.

VRMS - Vertical Horizontal root mean square, a measurement of position accuracy.

RTK Delay - Time in seconds since the last RTK message was received.

Link Quality (CALC) - A calculation of how strong the link between the source of corrections is to the receiver. This will be calculated by LandfillGrade™ only if it is not provided by the receiver.

Link Quality (GPS) - A calculation of how strong the link between the source of corrections is to the receiver. This comes from the receiver.

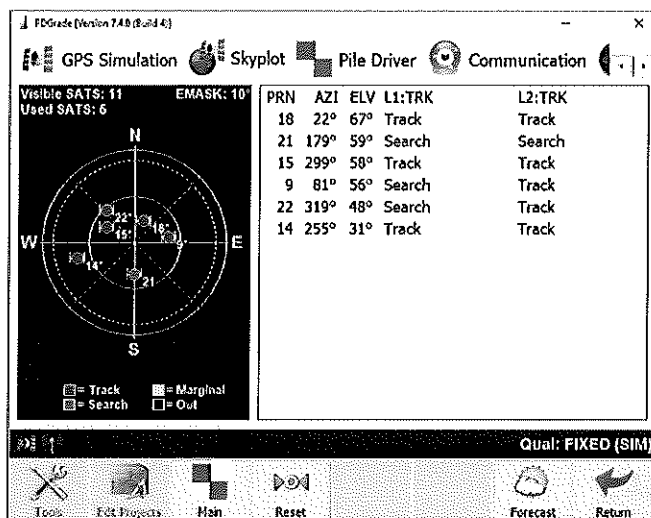
Baseline - Distance from the base station and the rover

UTC Date - Date provided by the receiver in UTC (Universal Time Coordinated)

UTC Time - Time provided by the receiver in UTC

Skyplot

Under the Skyplot tab, the spatial orientation of the satellite constellation is shown.



Visible SATS - Total number of GPS/GLONASS satellites visible in the sky

Used SATS - Total number of GPS/GLONASS satellites being used in the computed position.

EMASK - Elevation mask is the cut off line on the horizon where a satellite will no longer be used.

PRN - The satellite reference number.

AZI - The satellite azimuth.

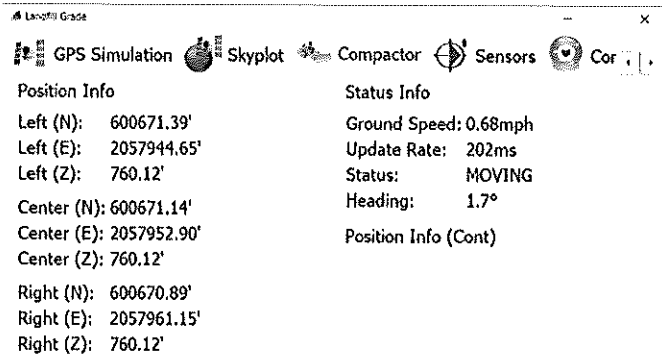
ELV - Elevation from the horizon

L1/L2 TRK - IF the satellite is being tracked in both L1 and L2 bands.

Forecast - Pulls satellite forecast almanac data.

Vehicle

This page shows vehicle information such as speed, heading, and slope sensor values.



Position Info

Left, Center, Right (N,E,Z) - Local Coordinates machine's blade offsets.

Status Info

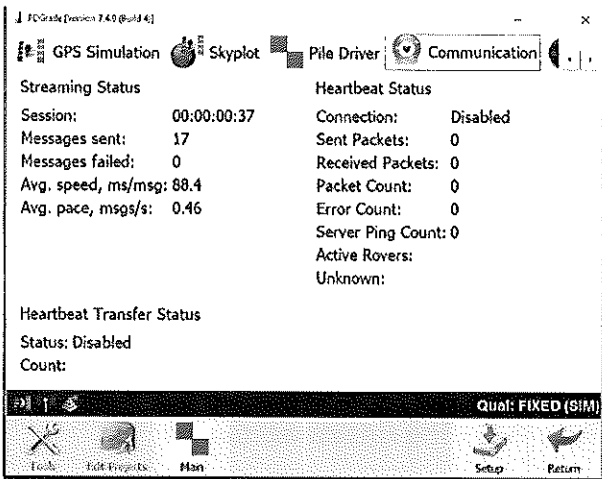
Ground Speed - Speed of movement calculated from GPS position

Update Rate - Position update

Status - Stopped or Moving

Heading - The direction of travel calculated from the GPS

Communication



Streaming Status

The Streaming Status gives you information about the LandfillGrade™ connection to Carlson Command.

Session - How long the connection to Command has been active

Messages Sent - How many total messages this session have been sent to command

Messages failed - How many of the messages sent have failed.

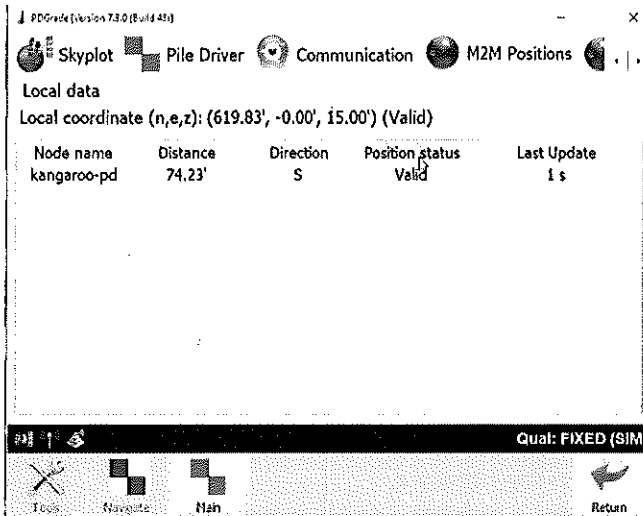
Avg. speed (Milliseconds per Message)

Ave. pace (Messages per Millisecond)

Heartbeat Status

This feature is deprecated. Shown for legacy only.

M2M Positions

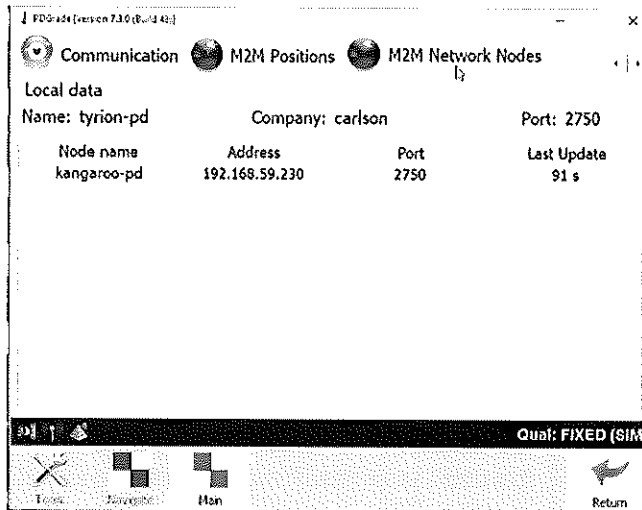


M2M Positions provides information about the position sharing between two machines. When enabled, this feature allows the machines to communicate their position directly to another machine or machines.

Local Data - This section shows the position your machine is sharing and if it is valid. This is useful for troubleshooting when looking at another machine's M2M Position tab.

- Node name - The name of another machine sharing positions with your machine.
- Distance - the distance away that machine is from your machine.
- Direction - The direction this machine is moving
- Position Status - This is determined by the other machine's GPS quality. A fixed solution is valid, and any other quality is considered invalid.
- Last Update - the last time this machine sent a position to your machine. Machines will share their positions more often the closer they are to each other.

M2M Network Nodes



M2M Network Nodes shows all of the machines connected to your machine.

Local Data

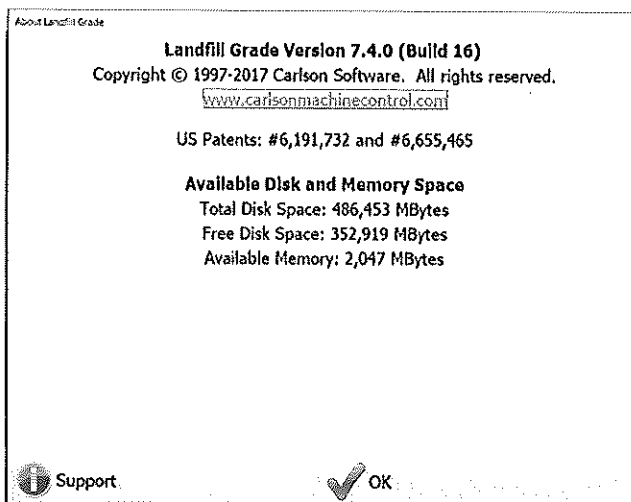
- Name - The name of your machine on the network
- Company - The company set for your network
- Port - the port your machine is accepting data on for M2M info.

Table info

- Node name - The name of the machine on the network.
- Address - The IP address of the machine on the network.
- Last Update - the last time this machine sent a message to your machine.

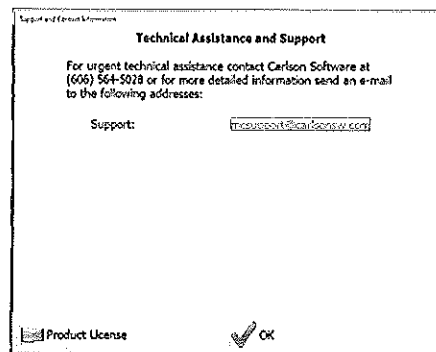
About LandfillGrade™

The LandfillGrade™ version as well as available memory and disk space is shown here.



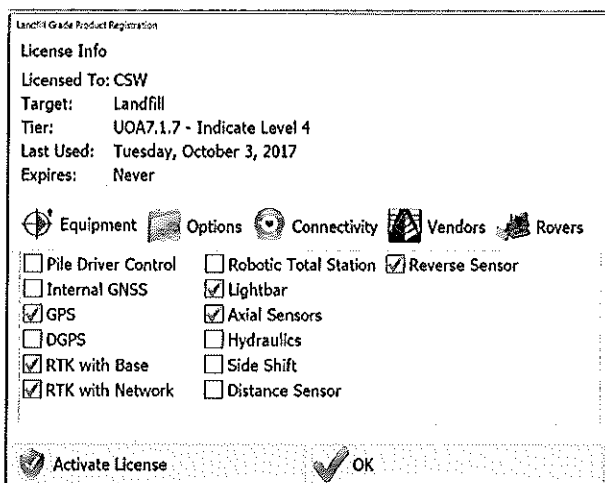
Support

The Support page provides the direct line for customer support as well as the support email for machine control support at Carlson.



Product License

The Product License provides all of the information about the registration of this copy of LandfillGrade™



Licensed To - The owner of the license

Target - What industry this license is for.

Tier - Shows the default UOA Tier that this license was created for.

Last Used - The last time LandfillGrade™ was activated under this license

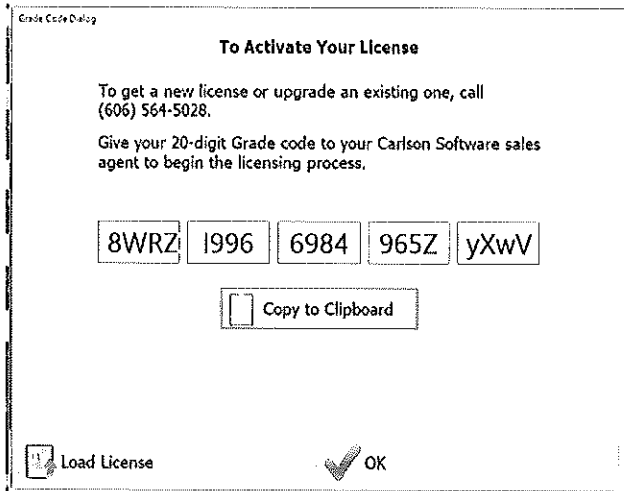
Expires - How long the license has before it will be inactivated. For a full purchased copy this will be "Never" and for a demo or temp license it will read the number of days.

Tabs - The tabs have different categories of options that may or may not be checked for your license of LandfillGrade™

- **Equipment** - This refers to any additional hardware that will be supported
- **Options** - These are optional features that can be turned on or off
- **Connectivity** - This refers to features related to data transfer either to a back office or between machines
- **Vendors** - These refer to supported sensor or interface vendors that are supported.
- **Rovers** - These are vehicle types that can be used in different versions of Grade products

Activate License

Activate license gives you the 20 digit code for activating the license. Instructions for registering the product can be found in the **Product Registration** section of this manual. The **Copy to Clipboard** feature allows you to press the button and get the number attached to your clipboard. You can just paste the number once it is on your clipboard.



TROUBLESHOOTING

Carlson Grade™ Issues	
Issue	Possible Resolutions
Localization Problems	• Check Settings - Verify that a localization file is loaded and that the correct State Plane or UTM Projection is in use. Ensure that the correct GPS receiver type is in use and the correct vehicle type is entered. • Review Files - Verify that the localization file looks normal. Open the file in a standard text editor, like Notepad, to see that it has the expected number of points and that it is not garbled looking (corrupt data). • Verify Position GPS Antenna Location - Check the antenna positions with a GPS rover to verify that the positions of offsets are entered correctly versus it being a localization problem. (Note: There is the cut/fill position reporting in addition to the raw GPS position) • Receiving Corrections - If the base station has been reset, make sure that the correct coordinates of the base station are still entered into the base receiver so that the corrections broadcasted to the receivers are accurate.
GPS Radio and Signal Problems	What to check: cabling, power level (battery level), bad antennae, and being out of the line of sight.
Base GPS Receiver No Power	Be sure to hold the power button for a few seconds. The battery must be charged or an external battery needs to be connected. Check cabling to see if the connection is damaged.
Base Radio Does Not Power	The battery must be charged or the radio connected to external power source.
Base Station Does Not Connect to Receiver	Be sure the base is on and that the COM cable is in the correct port.
Base station connects but Sees No Satellites	Check the connection of the GPS antenna cable. Be sure to have a good view of the sky. Be patient; it may take 30 seconds or more for the GPS to acquire satellites.
Base Station Started But Radio Not Transmitting	Check the cable from the receiver to radio. If a TX light exists, the light should flash. Check for power to the radio. Make sure the Base is set up correctly. Follow Base setup protocol for specific Base Manufacture.
Rover GPS Receiver Power Does Not Light	Be sure there is power to the receiver. Check to see if ignition is needed to be in the "on" position for power. The system may be grounded through the

Up	master switch.
Rover GPS Receiver Satellite Does Not Light Up	Check the connection of the GPS antenna cable to the receiver. Check to see that all bulkhead connections on the machine are tight. Check the view of the sky. It may take 30 seconds for GPS to acquire satellites.
Rover GPS Receiver Radio Does Not Light Up	Check the base station to be sure it is transmitting. Check the channel and protocol being transmitted. The most common issue between radios are mismatched settings.
Out of Design/OFF GRID	Check that the correct design surface is being used. Check machine coordinates to see if they are near known coordinates. Check the setup of base station for an incorrect base location.
Cellular Connectivity	If RTK corrections are broadcasted over a cellular network and the GPS position will not go "Fixed", it is possible that there is inadequate cellular reception. Try checking to see if the cellular network provider has full coverage at the job site. If corrections are not received at all, try shutting down Landfill Grade and opening a web browser to ensure that there is connectivity to the internet.
Power Connections and Cables	If there is no position data inside the vehicle, check the cable to the GPS antenna as well as any bulkheads. If, for instance, a CBx6 is not starting up when the machine is turned on in the cab, check the cable from the CBx6 to the ignition wire. Bad cables are the source of many problems and can usually be easily diagnosed and replaced.
Loading UOA files	If a UOA file is loaded to license a copy of Grade and it is showing a message "Invalid UOA," the issue is mostly likely one of three things. 1. An error in transposing the 20 digit code from the screen to the request form. Make sure to take note of case, and similar letters/numbers such as S and 5, Z and 2, 0 and O etc. Sometime the best thing to do is send an accompanying screenshot of the 20 digit code. 2. In some cases site UOAs are used for testing a unit and it is possible someone has left this file in the C:\LandfillGrade\Program folder. Look in this folder for a file called "site.uoa." If this file is there, delete it before loading the new UOA file. 3. The old UOA was set to "Read Only." This was done in the past to prevent corruptions to the file from improper shutdowns. In order to load a new one this option must be unchecked on the old file. Find the file, "cg.uoa" in C:\Shovel Grade\Program and right click it, and then select "Properties." Uncheck the option for "Read Only."

LandfillGrade™ Issues	
Issue	Possible Resolutions
No compaction/pass count colors	• Check that the project has an Existing Surface • Check that Compaction is selected and colors configured under Tools>Options>Surface Options • The Existing surface is probably too small and ends where the colors end. • Best solution is to use the current existing surface updated by Carlson Protools in the Carlson Command office system. Create and Edit your project there, and select the current surface from the cloud picker, and then transfer the project to the machine.
Compaction or pass count colors stop suddenly in the plan view.	• If Command is not an option, you can create Surface from Inside Landfill Grade. Go to Edit Project> Select Existing Surface>New Surface from Active Design>Grid Spacing (Change Grid Spacing based on Wheel size) >Create Surface> New File (Name File accordingly, Example: [site_name]-existing)
Customer Wants to Change Pass Count.	Go to Tools> Options>Surface Options> Pass Count Options> Add or Remove Pass Count> Change Color
Compaction (Deflection) Not set to Customer Standards	Go to Tools> Options>Surface Options>Compaction Options> Add or Remove Elevation setting, select color

Maintenance

Daily Care

Keep all components clean and dry prior to placing in carrying case.

Use connector caps when the machine is not in use.

Do not use high-pressure spray directly on cable and components.

Check all connection regularly for wear or physical damage.

Keep machine battery in good condition. Isolate all components on the system if welding or jumpstarting machine.

Touch screen cleaning

Clean regularly to maintain a quality image and prevent faulty operation.

The front of the touch screen should be kept free of dirt, fingerprints, and other materials that could degrade the touch-screen.

For best results use a clean, damp, non-abrasive cloth towel and any commercially available window cleaner to regularly clean the surface. Apply cleaner to the towel rather than the touch-screen.

Never use alcohol, ether, benzene, acetone or any other type of solvent. Do not use high-pressure spray. Do not spray toward the screen.

Prior to calling tech-support, please check the following

Check to see that the various components have power and are powered up.

Check all cable connections are secure and tight.

Disconnect connection to check for damage to connector.

LandfillGrade™ and GPS Troubleshooting Guide:



GPS Lost Lock:

If this appears you can select GPS and Monitor. Look at the Quality in the right hand column. It should read RTK Fixed if all is OK. If it says RTK Float, then it should fix in a few minutes; if not, try to shut the system down and restart. If it says RTK Autonomous then the correction radio is not working and you should check to see if you still have a correction radio antenna and verify that the base is working.

If the GPS will not go into a fixed solution after restarting the system, then your local dealer will need to look at the GPS receiver. Most receivers have indicator lights to tell you that it is receiving GPS signal from the satellites and that it is receiving radio corrections. This will tell your dealer if the problem is between the antenna and the receiver or between the receiver and the computer.

If the lights on the receiver do not light up, then you have a power issue. If you have power but have no GPS you will need to change the GPS antenna with one from your stock. If this does not fix the problem, you need to put the original antenna on a troubleshooting cable (it is a good idea to have a spare cable with a TNC connector on one end and a type N connector on the other approx. 10 to 15 feet in length to hook to the receiver to the existing antenna to see if the receiver is working). If the troubleshooting cable works then your cable is bad or the ends are loose. If the cable is solid-core please replace it. If it is twisted-core, try new ends.

If you have no signal from the correction radio, then you need to verify that it is still on the machine (it is typically a thin metal antenna). If it is still there, then you need to verify that the base is transmitting a signal by getting a GPS unit in the area where you are to see that it works.

Status Bar Reference Guide

Below provides a description of what each icon on the status bar represents.



GNSS Sats are visible and tracked



When visible, means Grade is receiving RTK corrections from source



Bluetooth connection with GPS receiver



Logging is enabled



Streaming is enabled



Heartbeat is enabled (deprecated)



When visible, means machine/vehicle is in reverse (requires reverse relay)



Files are being uploaded over network



Cellular Signal strength = Very Low



Cellular Signal strength = Low



Cellular Signal strength = Moderate / Acceptable



Cellular Signal strength = Good



Cellular Signal strength = Very Good



WiFi Signal strength = Very Low



WiFi Signal strength = Low



WiFi Signal strength = Moderate / Acceptable



WIFI Signal strength = Good



WIFI Signal strength = Very Good



Battery Level indicator = Empty



Battery Level indicator = Full



Symbol will overlay one of the above icons to indicate where the problem resides

CAN Dongle not detected will show in the status bar if Grade diagnoses a connection problem. (Typically when using an external CAN Dongle)

Internal CAN error message

(CAN Bus Error) displayed when connection between internal "Built-In" CAN and external CAN sensors.



Computer Problems

If the computer will not start, then the best solution is to use a voltmeter to verify whether there is power or not. If there is no power, check the battery or the fuse panel since those are where the computer derives its power from. If there is power, examine the power connector to the computer. If all seems well take the computer off the machine and return to your office and try to power the computer with a 110vac to 12vdc power supply that will power the computer. If the computer battery is dead it will not start immediately. When configuring the vehicles during installation, all backup files for the machine and project should be saved so that if a computer ever needs to be replaced it is less of a hassle.

Appendix A – Simulation Keys

Keys:

Keyboard entries for use in Simulation Mode of vehicles.

Simulation Mode Keyboard Controls

These keys affect the GPS simulation:

CTRL+F8	Stop position update
CTRL+F9	Autonomous mode
CTRL+F10	Float Mode
CTRL+F11	Undefined
CTRL+F12	Normal operation

These keys are common to all vehicle simulations:

Left Arrow	Turn left
Right Arrow	Turn right
Up Arrow	Raise elevation
Down Arrow	Lower elevation
F	Faster
S	Slower
R	Reverse
T	Reset simulation
Q	Toggle freeze
Z	Toggle automatic

These keys are common to all blade vehicles:

Page Up	Pitch up
Page Down	Pitch down
Insert	Slope left
Delete	Slope right

These keys are for bull dozers:

1	Raise left slope board
2	Lower left slope board
9	Lower right slope board
0	Raise right slope board

Appendix B – Hardware

Computer Data: Carlson Control Box



Display	
Viewable Area	4:3 aspect ratio for 8" and 10" profiles.
Native Resolution	800 x 600.
Brightness	1,400 nits typical. This value only applies to indoor performance, the effective outdoor performance is greater than 1,600 nits. (1 nit = 1 Cd/m2.) The panel PC also supports automatic backlight control using an inbuilt light sensor and is configurable through a PC utility.
Viewing Angle	Horizontal: 140° typ, 120° minimum. Vertical: Up: 50° typ and 40° minimum. Down: 70° typ and 60° minimum.
Touch	5-wire resistive on 1.8mm glass. Supplied with surface protection film fitted.
PC	
Processor	Intel® Atom™ E3845 1.91Ghz.
Instruction Set	64-Bit.
Memory	4GB RAM.
Mass Storage	SSD 64 GB.
System Chipset	Intel® Bay Trail E3800 Series.
BIOS	AMI Aptio UEFI. Multi Stage Watchdog.
Operating System	Windows 7 Embedded.
Video and Audio	
Video	Intel® Graphics Core with 2D and 3D hardware accelerator.
Sound	High Definition Audio Interface with dual integrated stereo speakers.
Wireless Connectivity	
GPS	Optional 72-Channel UBlox NEO-M8 GPS receiver. Supports: GPS/QZSS L1 C/A, GLONASS L10F, BeiDou B1, SBAS L1 C/A; WAAS, EGNOS, MSAS. External SMA connector, with Active Antenna support for enhanced GPS reception.
3G	Quad Band 3G /4G 900/1800/850/1900/2100 module with Micro SIM and external SMA antenna support.
Wireless LAN	IEEE 802.11 AC/a/b/g/n module with dual external SMA antennas.

Physical Characteristics	
Mounting	75mm VESA mount.
8" Dimensions	220mm x 193mm x 55mm.
10" Dimensions	262mm x 229mm x 55mm.
Environmental	Operating: -40°C to +75°C. Storage: -40°C to +85°C. 10% to 90% RH, non-condensing.
Certification	Compliant with applicable electromagnetic compatibility.
Protection	IP65 front and rear.
Interfaces	
COM	Three RS-232 ports available with QuickConnect 2 interface cable.
USB	One full function USB 2.0 port available with QuickConnect 4 interface cable. Two full function USB 2.0 TYPE A ports available on the rear and front edge.
LAN	One 10/100 Base-T LAN port available with QuickConnect 4 interface cable.
Digital I/O	Four configurable ports available with QuickConnect 1 breakout cable.
CAN 1 & 2	Output Power: Regulated 24V/12W (Shared)
Serial 1 & 2	Output Power: System Power 12V or 24V. Current Limiter: 1A (Shared)
Function Keys	Power on/off, backlight brightness up/down, and volume up/down. Function keys can be re assigned in software.
Power	
Power Supply	Input voltage range 8 VDC to 39 VDC.
Accessory Control	The panel PC has an accessory input for power on/off control through the QuickConnect 1 break out cable.
UPS	Internal 7.2Wh Uninterruptible Power Supply (UPS) providing up to 30 minutes of run time.

Heading Receiver Data – Carlson MC Pro Vx6



Mechanical

- Case: Rugged IP69k rated plastic enclosure
- Size: 68.9 L x 21.0 W x 12.0 H (cm)
- Weight: 2.4 kgs (5.4 lbs)
- Mount: 8 M8 mounting holes (Attaches to 4330.230 Vibration Mount)
- 18-Pin Male Environmentally sealed

GNSS Receiver

- Receiver Type: Eclipse II – GNSS L1 & L2 RTK with carrier phase
- Channels: 12 L1CA GPS 12 L1P GPS
 - 12 L2P GPS (with subscription code)
 - 12 L2C GPS (with subscription code)
 - 12 L1 GLONASS (with subscription code) 12 L2 GLONASS (with subscription code)
 - 3 SBAS or 2 additional L1CA GPS
 - 1 L-Band SBAS
- Update Rate: 10 Hz Standard, 20 Hz Available

Dual Antenna heading accuracy < 0.25 degrees RMS Pitch Tilt and Roll to < 1degree

Antenna

- Dual Freq APEX – GPS L1/L2/L5

Power

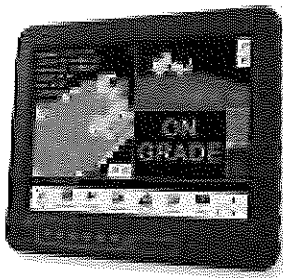
- Input voltage 3.3VDC +- 5%, Isolated Power Consumption: 6.5W, RTK. Current consumption: 0.54A max, RTK.

Appendix C – Supported Hardware

We suggest using Carlson Machine Control hardware because we support our hardware with an industry exclusive three year warranty. Furthermore, we are able to control the design of our hardware and ensure that it will always run efficiently for our applications..

For LandfillGrade™, we suggest using the following setup:

- Carlson MC-8/10
- Carlson Vx6 receiver and dual antenna (with a built in slope sensor and UHF radio)



Appendix D – Online Resources

<http://www.carlsonsw.com/products/machine-control/>

We thank you for your continued support!

Bid Tabulation
City of High Point, North Carolina
GPS Equipment Control
Bid # 28-061125
Wednesday 6/11/25 2:00 PM

Supplier	Total Bid
Jobsite Technologies, Inc	\$124,795.00

CITY OF HIGH POINT

AGENDA ITEM



TITLE: Consideration of a Task Order with Hazen - Condition and Operational Assessment

FROM:
Robby Stone
Public Services Director

MEETING DATE:
July 17, 2025

PUBLIC HEARING:
No

ADVERTISED DATE/BY:
N/A

ATTACHMENTS:
1. Scope of Services

PURPOSE: To approve a task order with Hazen for professional engineering services to perform a condition and operational assessment of Eastside Wastewater Treatment Plant (WWTP). The City has a master agreement for professional services with Hazen.

BACKGROUND: The most recent upgrades to the Eastside WWTP were conducted in the mid-1980s and upgraded in 2000 with a permitted flow of 26 MGD. Hazen completed an Expansion Evaluation for the Eastside WWTP in 2023, and one of the recommendations in the memorandum was for the City to perform a detailed condition assessment of the existing WWTP structures and equipment that will lead to the development of a list of improvement projects needed for ongoing operations and future expansion. Hazen will perform the following tasks as part of the proposed Condition and Operational Assessment:

- Perform a detailed condition assessment of the WWTP structures and equipment through visual inspection and pump efficiency testing.
- Review internal operational practices as the City desires to perform consistent with industry best practices.
- Develop a Capital Improvements Program (CIP) plan for Eastside WWTP.
- Compile findings of condition assessment, operational assessment and CIP plan into a Preliminary Engineering Report.

BUDGET IMPACT: Funds are available in the FY 2025-2026 Budget.

RECOMMENDED ACTION REQUESTED: City Council is requested to consider a task order with Hazen in the amount of \$350,000 for professional engineering services for a condition and operational assessment for the Eastside WWTP and authorize the appropriate City Official(s) to execute all necessary documents.

July 8, 2025

Mr. Robby Stone
Public Services Director
211 S. Hamilton Street
High Point, NC 27261
336-883-3217

Re: Eastside WWTP Condition and Operational Assessment

Dear Mr. Stone:

Hazen and Sawyer (Hazen) appreciates the opportunity to submit this letter proposal to provide consulting engineering services for the Eastside Wastewater Treatment Plant (WWTP) Condition and Operational Assessment Project. The scope of services outlined below is proposed to be a supplemental agreement to the On-Call Professional Services Agreement between the City of High Point (City) and Hazen and Sawyer.

Project Background: The City owns and operates two NPDES permitted facilities; Eastside WWTP and Westside WWTP. Eastside WWTP is the City's largest facility with a maximum month design flow of 26 mgd and was first constructed in the mid-1980s. Hazen was the design engineer for the last major expansion project at Eastside WWTP in 2000, so Hazen's knowledge of the existing facilities will benefit this effort. Hazen completed an Expansion Evaluation for Eastside WWTP in 2023, and one of the recommendations in the memorandum was for the City to perform a detailed condition assessment of the existing WWTP structures and equipment that will lead to the development of a list of improvement projects needed for expansion.

The City is seeking assistance with the following tasks:

- Perform a detailed condition assessment of the WWTP structures and equipment through visual inspection and pump efficiency testing;
- Review internal operational practices as the City desires to be performing consistent with industry best practices;
- Develop a Capital Improvements Program (CIP) plan for Eastside WWTP;
- Compile findings of condition assessment, operational assessment and CIP plan into a Preliminary Engineering Report (PER).

Detailed Scope of Work: The following describes Hazen and Sawyer's detailed scope of work being proposed for the project.

Task 001 – Condition Assessment

- Subtask 1A Visual Condition Assessment of Structures and Mechanical Equipment – Hazen will

conduct a limited visual assessment of structures and all major process mechanical equipment at Eastside WWTP where access is made available.

Structure assessment will include all exposed concrete above grade and interior concrete of any basins removed from service, dewatered, and cleaned by the City. Structure assessment will also include any miscellaneous metals exposed including ladders, handrail, and equipment mechanisms. Assessment of structural concrete will be conducted in accordance with applicable guidelines of the American Concrete Institute (ACI). Among conditions to be assessed include surface conditions, joint deficiencies, cracks, leakage, efflorescence, freeze-thaw damage, spalling, scaling, delamination, soundness, evidence of corrosion, exposed reinforcement, evidence of chemical attack, previously repaired areas, evidence of settlement, excessive deflection, and any other observed deficiencies. Visual assessment will use photography, soundness evaluation, and other optical aids as needed to assess concrete.

Hazen will provide a visual inspection of the process mechanical equipment and structures in the facilities listed below utilizing the NCDEQ DWI Water and Wastewater Utility Evaluation Guidance Document. This document provides guidance for facility asset condition rating scales, estimating the asset's remaining useful life, level of service and risk of failure. The condition assessment data will be gathered using ArcGIS Survey 123, which will allow efficient data collection in the field using smart forms that are filled out on tablets.

A list of facilities for liquid treatment and solids treatment includes:

1. Bar Screen Facility (*The City is currently replacing the mechanical bar screens, so Hazen will only assess the structure, not the new mechanical equipment*)
2. Grit Facility
3. Primary Clarifiers 1-5
4. Primary Sludge Pump Station
5. Equalization Basin and Pump Station
6. Anaerobic/Anoxic/Aeration Tanks
7. NRCY Pump Station
8. Aeration Blower Building
9. Final Clarifiers 1-4
10. RAS/WAS Pump Stations 1-2
11. Filter Air Scour Blowers
12. Low Pressure NPW Pump Station
13. High Pressure NPW Pump Station
14. Effluent Pump Station
15. Washwater Facility (Storage Tank, Recovery Basins 1-2 and Washwater Return Pump Station)
16. Plant Drain Pump Station
17. Fermentation Tanks
18. DAF Thickeners 1-3
19. Sludge Thickener Facility

20. Solids Processing Facility (Centrifuges, Incinerator, and associated systems)
21. Sludge Blending Tanks, Sludge Transfer Pump Station, and Centrifuge Feed Pump Station
22. Equalization/Sludge Storage Tanks and Pump Station
23. Sludge Receiving Station
24. Ash Lagoon and Decant Pump Station
25. Chemical Storage and Feed Facility
26. Odor Control Facility

The following facilities are either currently being upgraded or a separate study is being performed to assess the condition of the facility's structure and equipment; therefore, these facilities will not be included in this project's visual condition assessment scope:

- Effluent Filters 1-6
- UV Facility
- Subtask 1B Visual Condition Assessment of Electrical Equipment – Hazen will conduct a limited visual assessment of all major electrical equipment at Eastside WWTP including electrical distribution equipment, standby power equipment, and motor control centers, where access is made available. A weighted evaluation of equipment condition, capacity, age, and criticality will be used to provide a prioritized list of electrical infrastructure improvement recommendations. An arc flash study is not required at Eastside WWTP until May 2028 and is not included in this scope of work.
- Subtask 1C Visual Condition Assessment of Field Instruments – Hazen will conduct a limited visual assessment of all field instruments at Eastside WWTP where access is made available. A weighted evaluation of field instrument condition, age, and criticality will be used to provide a prioritized list of field instrument improvement/replacement recommendations. The City is currently undergoing a SCADA and PLC Upgrade Project, therefore assessment of these items are excluded from the scope
- Subtask 1D Pump Testing – To augment the visual condition assessment of key pumping facilities at Eastside WWTP, Hazen will perform pump efficiency testing on the primary sludge, equalization, NRCY, RAS, effluent, plant drain, and wash water recovery pumps. The head, flow, and power data points collected during testing will be plotted against the pump's factory curve to determine the current level of pump performance and efficiency. If the pump's factory curve is not available, then a draw down test may be performed for submersible pumps as an alternative to determine efficiency.
- Subtask 1E Operator Interviews – Hazen will conduct small team interviews with City staff to ascertain any specific structure, mechanical equipment, electrical equipment, or instrumentation performance issues. Hazen will utilize staff feedback when developing the recommendations for facility upgrades.
- Subtask 1F Valve/Gate Field Assessment – Hazen, with the assistance of City staff, will conduct a field assessment of existing valves and gates at Eastside WWTP that are considered critical for operation and maintenance, and that have not already been examined recently (i.e. AAA tank

gates). If any valve or gate is unable to be accessed or exercised by City staff, then Hazen will document the condition and make a recommendation for either rehabilitation or replacement.

- Subtask 1G AAA Tank In-Basin Inspection – Hazen will conduct an in-basin inspection of one full train of the Anaerobic/Anoxic/Aeration Tanks. Inspections will require City staff to take a train out of service temporarily, and City staff will need to dewater and clean the tank. Hazen will assess the condition of concrete in dewatered portions of the basin and provide recommendations for concrete repairs. Hazen will also perform a visual inspection of the mixers and diffusers in the dewatered portions of the basin. The inspection will require confined space entry, along with coordination and support from City staff. It is assumed that the condition of a single train, will be consistent with the other three trains that will not be taken out of service.

Task 002 – Operational Assessment

- Subtask 2A Operation Assistance - Hazen activities will be focused on shadowing City operation staff to understand their daily operational processes so they can be evaluated for efficiency and effectiveness, and consistency with industry best practices over the course of a few days. During the evaluation, potential operational improvements for either the performance, effectiveness, or efficiency of the treatment process will be noted. Hazen will provide an experienced certified wastewater operator to conduct the evaluation.
- Subtask 2B Review of Maintenance Records – Hazen will review the maintenance records for the mechanical equipment. This review is dependent on the City providing access to all documents produced involving work on the WWTP equipment.
- Subtask 2C Review of Process Records – Hazen will review existing process spreadsheets and records used by City staff to monitor the WWTP. This review is dependent on the City providing access to all documents produced.
- Subtask 2D Review of Lab Operations – Hazen will conduct an assessment of existing Lab facilities and review existing Standard Operating Procedures (SOPs) or other documented practices/procedures related to process monitoring sampling.

Task 003 – CIP Development

- Under this task Hazen will produce a CIP plan designed to meet the near-term and long-term operational needs of the WWTP, through investment in capital infrastructure projects and repair and replacement programs. The CIP plan will be based on the findings of the condition and operational assessment tasks, and will result in a prioritized list of improvement projects based on a 10-year system outlook for financial planning. Planning level capital costs and CIP forms will be developed for recommended improvements.

Task 004 – Prepare Preliminary Engineering Report

- Hazen will integrate the findings from the condition assessment, operational assessment and CIP development with the 2023 Expansion Evaluation Memorandum.
- Hazen and Sawyer will document the condition assessment, operational assessment and CIP development in a Preliminary Engineering Report (PER). A draft PER will be submitted to the City approximately two (2) weeks prior to the Review Meeting.

- This task includes Hazen’s project administration time for the duration of the project. As part of project administration, Hazen will provide monthly invoicing with schedule updates.

Task 005 – Conduct Review Meeting

- Hazen and Sawyer will participate in a Review Meeting with City staff to present the PER. A PowerPoint presentation will be prepared to visually present the information and to facilitate discussion. City review comments during this meeting will be incorporated prior to finalizing the PER.

Schedule and Fee Estimate:

Hazen and Sawyer proposes to accomplish the scope of work for a lump sum fee of \$337,000, plus an estimated \$13,000 for reimbursable expenses. Reimbursable expenses will be charged at cost with no markup. The items may include but are not limited to travel expenses, mileage at the IRS approved rate, etc.

Project Task	Hours	Costs
1.0 – Condition Assessment	725	\$155,000
2.0 – Operational Assessment	335	\$74,000
3.0 – CIP Development	180	\$37,000
4.0 – Preliminary Engineering Report	285	\$60,000
5.0 – Conduct Review Meeting	50	\$11,000
6.0 – Reimbursable Expenses	-	\$13,000
Total	1,575	\$350,000

Hazen and Sawyer proposes the following schedule based on a Notice to Proceed (NTP) date of August 1, 2025. If the NTP is delayed, then the other milestones will shift keeping the same durations as shown in the schedule.

Milestone	Date
Conduct Condition Assessment *	August – September 2025
Conduct Operational Assessment	August – September 2025
CIP Development	October – December 2025
Draft Preliminary Engineering Report	February 2026
Final Review Meeting	March 2026
Final Preliminary Engineering Report	April 2026
*The timeline for the AAA Tank In-Basin Inspection is dependent on when the existing gates are rehabilitated and one full train can be taken out of service.	

Thank you very much for the opportunity to submit this scope of work, and please let me know if you would like to discuss this scope further.

Best Regards,

Christy Tommerdahl

Christy Tommerdahl, PE
Senior Associate

Enclosure

cc: Aaron Babson

TJ Lynch

CITY OF HIGH POINT

AGENDA ITEM



TITLE: Consideration of a Task Order with Hazen - Tertiary Filtration Study

FROM:
Robby Stone
Public Services Director

MEETING DATE:
July 17, 2025

PUBLIC HEARING:
No

ADVERTISED DATE/BY:
N/A

ATTACHMENTS:

1. Aerial Map
 2. Scope of Services
-

PURPOSE: To approve a task order with Hazen for professional engineering services to perform a study of the tertiary filtration at the Eastside Wastewater Treatment Plant (WWTP). The City has a master agreement for professional services with Hazen.

BACKGROUND: The City has two tertiary filtration facilities at Eastside WWTP. The original filters 1-4 are Wheeler bottom and were constructed around 1985. These filters are at the end of their useful life based on the amount of carbonation, signs of exposed reinforcing, and the aggregate loss that has been observed. The Public Services Department requested Hazen to develop a scope and fee to perform a tertiary filtration study that compares the replacement of Filters 1-4 under drains in kind versus replacing Filters 1-4 with cloth media disk filters. Various flow conditions will be evaluated as part of the study.

BUDGET IMPACT: Funds are available in the FY 2025-2026 Budget.

RECOMMENDED ACTION REQUESTED: City Council is requested to consider a task order with Hazen in the amount of \$140,000 for professional engineering services for a tertiary filtration study for the Eastside WWTP and authorize the appropriate City Official(s) to execute all necessary documents.



Filters 5-6

Filters 1-4

June 20, 2025

Mr. Robby Stone
Public Services Director
211 S. Hamilton Street
High Point, NC 27261
336-883-3217

Re: Eastside WWTP Tertiary Filtration Study

Dear Mr. Stone:

Hazen and Sawyer appreciates the opportunity to submit this letter proposal to provide consulting engineering services for the Eastside WWTP Tertiary Filtration Study. The scope of services outlined below is proposed to be a supplemental agreement to the On-Call Professional Services Agreement between the City of High Point (City) and Hazen and Sawyer.

Project Background: The City has two tertiary filtration facilities at Eastside WWTP. The original Filters 1-4 are estimated to have been constructed sometime around the year 1985 and the filter bottoms consist of 4-inch deep precast Wheeler bottom blocks with a 6-inch underdrain plenum. The media in Filters 1-4 consists of 1' of support gravel, 9" of silica sand, and 1'-8" of anthracite. A second filtration facility was constructed during the 26 mgd Expansion Project in 2000. Filters 5-6 consist of TETRA flume block underdrains, 1'-2" of support gravel, and 4' of sand media. Final clarifier effluent flow is split between the two filtration facilities based on filter surface area, with Filters 1-4 receiving approximately 60% of flow and Filters 5-6 receiving approximately 40% of flow.

At the City's request, Hazen and Sawyer performed an inspection of Filter No. 3 on March 4, 2025, after the City had drained the filter and removed the filter media, gravel and air scour lateral piping. An inspection letter was provided on March 11, 2025, with a summary of what was noted during the inspection and a list of recommendations. The letter noted the filter bottoms are at the end of their useful life given the amount of carbonation, signs of exposed reinforcing and the aggregate loss that was observed. The recommendation was to replace the filter bottoms in like kind or evaluate other filter bottoms/underdrain types.

Following the review of the inspection letter, the City requested Hazen and Sawyer develop a scope and fee to perform a tertiary filtration study that compares the replacement of Filters 1-4 underdrains in like kind versus replacing Filters 1-4 with cloth media disk filters.

Detailed Scope of Work: The following describes Hazen and Sawyer's detailed scope of work being proposed for the project.

Task 001 – Technology Review, Basis of Design Selection, and Site Visits

- Hazen and Sawyer will evaluate cloth media disk filtration as a replacement for existing Filters 1-

4. Two disk filter manufactures will be included in this conceptual description, one outside-in type manufacturer and one inside-out type manufacturer. Three basis of designs will be presented for each disk filter manufacturer:

1. Option 1: Existing Filters 5-6 remain in operation and a new disk filter facility will be designed to treat only a portion of the WWTP flow. It is assumed that the new disk filter facility will be designed to treat 60% of final clarifier effluent flow (~15.6 mgd max month / 46.8 mgd peak flow).
 2. Option 2: Existing Filters 1-6 are all taken out of service and a new disk filter facility will be designed to handle the current full WWTP flow (~26.0 mgd max month / 78.0 mgd peak flow).
 3. Option 3: Existing Filters 1-6 are all taken out of service and a new disk filter facility will be designed to handle an expanded full WWTP flow (~32.0 mgd max month / 96.0 mgd peak flow).
- Hazen and Sawyer will organize a site visit with City staff to two facilities near High Point, NC to view existing disk filtration facilities. It is assumed that one facility will have an outside-in type disk filter and the second facility will have an inside-out type disk filter; however, the City can ultimately decide which disk filter manufacturer(s) they would like to see in person.

Task 002 – Hydraulic Analysis

- Hazen will conduct a hydraulic analysis from the final clarifiers through the effluent pump station, to evaluate the incorporation of a new disk filter facility. A spreadsheet based hydraulic model will be developed for three flow scenarios:
 1. Option 1: Existing Filters 5-6 remain in operation and final clarifier effluent flow is split between Filters 5-6 and a new disk filter facility. It is assumed that the new disk filter facility will be designed to treat 60% of final clarifier effluent flow (~15.6 mgd max month / 46.8 mgd peak flow), and Filters 5-6 will continue to treat 40% of final clarifier effluent flow.
 2. Option 2: Existing Filters 1-6 are all taken out of service and a new disk filter facility will be designed to handle the current full WWTP flow (~26.0 mgd max month / 78.0 mgd peak flow).
 3. Option 3: Existing Filters 1-6 are all taken out of service and a new disk filter facility will be designed to handle an expanded full WWTP flow (~32.0 mgd max month / 96.0 mgd peak flow).
- For flow scenario Option 1, Hazen and Sawyer will determine the feasibility of adding a flow splitting structure in the existing hydraulic profile without impacting existing upstream or downstream treatment systems.

Task 003 – Conduct Preliminary Designs

- Hazen and Sawyer shall provide two preliminary level designs for the replacement of existing Filters 1-4 with a new cloth media disk filtration facility. The first preliminary design is for the alternative where existing Filters 5-6 remain in operation and final clarifier effluent flow is split between Filters 5-6 and a new disk filter facility. This preliminary design will only be developed if a flow splitting structure between existing Filters 5-6 and a new disk filter facility is

hydraulically feasible as determined in Task 002. The second preliminary design is for the alternative where existing Filters 1-6 are all taken out of service and a new disk filter facility will be designed to handle the current full WWTP flow. These preliminary designs will include the following components:

- Site selection and layout of the new disk filtration facility
- Conceptual yard piping design for final clarifier effluent to the new disk filtration facility and disk filter effluent to the UV facility.
- 2-D plan drawing of the conceptual design of the new disk filtration facility.
- Hazen and Sawyer shall conduct a visual inspection of the existing Filters 1-4 pipe gallery and provide a qualitative summary of the condition of the exposed concrete and mechanical assets. Hazen and Sawyer previously inspected the inside of existing Filter No. 3, and the recommendations provided in the inspection letter will be the basis for the alternative to replace Filters 1-4 in-kind. This includes the replacement of the existing underdrains with new precast Wheeler bottoms, the installation of all new porcelain spheres, the installation of a new air scour system, the performance of a media sweep blast down to sound concrete surfaces on the perimeter walls and filter troughs, and the application of a high strength repair mortar on concrete surfaces.
- An AACE Class 4 (-30% to +50%) capital and annual operations and maintenance cost estimate will be developed for both the replacement in-kind with Wheeler bottom type filters alternative and the two cloth disk filtration alternatives. These costs will be used in the development of a net present value of project cost associated with each filter alternative.
- Neither survey nor geotechnical evaluation are included as part of this scope.
- Based on an initial look at disk filter design parameters, an additional filter unit would not be needed to expand the facility from 26 mgd to 32 mgd, and the overall disk filter facility will be approximately the same size for both flow conditions. Therefore, a separate preliminary design for a 32-mgd disk filtration facility is not included as part of this scope.
- The preliminary design of the disk filtration facility will be developed around a single disk filter manufacturer.

Task 004 – Prepare Preliminary Engineering Report

- Hazen and Sawyer will document the technology review, hydraulic analysis and preliminary designs in a Preliminary Engineering Report (PER). A draft PER will be submitted to the City approximately two (2) weeks prior to the Final Review Meeting.

Task 005 – Conduct Review Meeting

- Hazen and Sawyer will participate in a Final Review Meeting with City staff to present the PER. A PowerPoint presentation will be prepared to visually present the information and to facilitate discussion. City review comments during this meeting will be incorporated prior to finalizing the PER.

Schedule and Fee Estimate:

Hazen and Sawyer proposes to accomplish the scope of work for a lump sum fee of \$140,000. Reimbursable expenses will be charged at cost with no markup. The items may include but are not limited to travel expenses, mileage at the IRS approved rate, etc.

Hazen and Sawyer proposes the following schedule based on a Notice to Proceed (NTP) date of July 1, 2025. If the NTP is delayed, then the other milestones will shift keeping the same durations as shown in the schedule.

Milestone	Date
Draft Preliminary Engineering Report	October 15, 2025
Final Review Meeting	October 29, 2025
Final Preliminary Engineering Report	November 19, 2025

Thank you very much for the opportunity to submit this scope of work, and please let me know if you would like to discuss this scope further.

Best Regards,



Christy Tommerdahl, PE
Senior Associate

Enclosure
cc: Aaron Babson
Todd Johnson

CITY OF HIGH POINT

AGENDA ITEM



TITLE: Consideration of a Task Order with HDR Engineering, Inc. - Shadybrook Lift Station

FROM:
Robby Stone
Public Services Director

MEETING DATE:
July 17, 2025

PUBLIC HEARING:
No

ADVERTISED DATE/BY:
N/A

ATTACHMENTS:

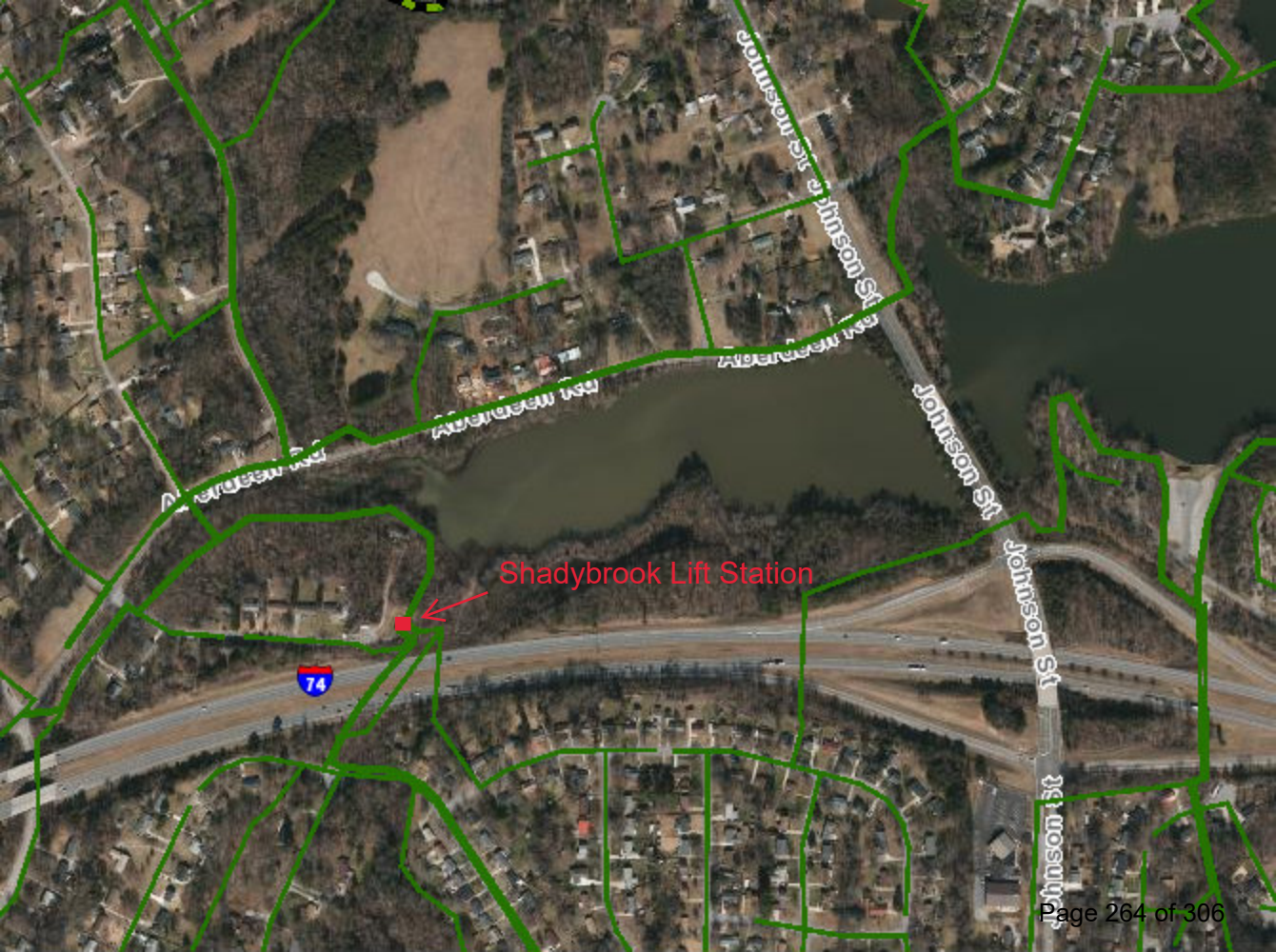
1. Map
 2. Scope of Services
-

PURPOSE: To approve a task order with HDR Engineering for professional services to perform a design of the Shadybrook Lift Station and associated sanitary sewer system. The City has a master agreement for professional services with HDR Engineering.

BACKGROUND: The Shadybrook Lift Station is located at the end of Hillside Drive, just north of I-74, along the western shoreline of Oak Hollow Lake. As land development continues within the sewer basin served by this station, several improvements have been identified to convey the projected increase in wastewater flow. These improvements include the replacement of the lift station from 1.7 million gallons per day (MGD) to 4.83 MGD, replacement of upstream and downstream gravity sewers and the increase in the size of the lift station force main for flow capacity.

BUDGET IMPACT: Funds are available in the FY 2025-2026 Budget.

RECOMMENDED ACTION REQUESTED: City Council is requested to consider a task order with HDR Engineering, Inc. in the amount of \$2,106,000 for professional engineering services for the design of the Shadybrook Lift Station and sanitary sewer system and authorize the appropriate City Official(s) to execute all necessary documents.





Supplemental Agreement

Exhibit A

Shadybrook Area Sewer Improvement Design

Introduction

City of High Point (CITY) has identified a need to perform engineering design of the Shadybrook Area Sewer Improvements for construction. The Shadybrook Lift Station is located at the end of Hillside Drive, just north of I-74, along the western shoreline of Oak Hollow Lake. As land development continues within the sewer basin served by this lift station, several improvements have been identified to convey the projected increase in wastewater flow generated by this development. These improvements include replacement of this lift station, and replacement of upstream and downstream gravity sewers and the lift station force main to increase their size and flow capacity.

This proposal includes HDR Engineering, Inc. of the Carolinas (CONSULTANT) recommended approach and deliverables to complete this project.

Scope of Services

The scope of work herein describes the CONSULTANT's approach to assist the CITY in developing a design for the Shadybrook Area Sewer Improvements based on the previously developed Shadybrook Sewer Improvements Project Preliminary Engineering Report dated February 20, 2025.

The following major tasks are described in detail in the following sections:

1. Project Management
2. Surveying
3. Geotechnical
4. Design
5. Permitting
6. Bidding and Award

Task 1: Project Management

Perform administration and accounting tasks, including the setup and management of a project accounting system, preparing monthly invoices, internal project reviews, and reviewing and paying subconsultant invoices. Coordinate project activities, data needs, schedule, decisions, etc., with CITY staff and subconsultants.

Prepare for and attend progress meetings to provide updates, review progress, discuss current activities, and make decisions. Anticipated meetings include a project kick-off meeting and monthly progress meetings, general update meetings will be conference calls, and design review meetings will be in-person.



Prepare for and attend one public meeting following the 60% design submittal. The task includes mailing out meeting notices for up to one hundred adjacent property owners, preparing overview maps of the project for display, and attending the meeting to discuss the project and answer questions.

TASK 1 ASSUMPTIONS:

- Project does not include state or federal loans or grants that require funding applications, developing supporting data or reports, or administration tasks.
- The City will provide meeting space for the public meeting.

TASK 1 DELIVERABLES:

- Monthly invoices and progress summaries.

Task 2: Surveying

Perform environmental, topographic, and planimetric surveys at the pump station site and along gravity sewer and force main alignments to support the design and permitting. The following activities will be performed:

- Prepare survey notice letters and mail to property owners adjacent to the pipeline alignments.
- Coordinate sub-consultant surveying activities.
- Establish survey controls throughout the project to support survey work.
- Survey limits for the pump station will include approximately 1 acre.
- Survey limits for the pipelines will be a 60-foot-wide corridor centered on the proposed pipe centerline for both the gravity sewers and force main.
- Perform property research and field survey to determine the location of property lines, road rights-of-way, and existing easements within the proposed construction limits of disturbance.
- Develop AutoCAD base map files and drawings of the surveys performed.
- Prepare easement maps and legal descriptions for the acquisition of temporary and permanent easements. The scope includes the following 3 properties along the downstream gravity sewer section:
 - PIN 7802108047 (Oakview Terrace Apartments)
 - PIN 7801298640 (2809 Lake Hill Ct, aerial tie-in to downstream sewer)
 - PIN 7801298542 (2807 Lake Hill Ct, aerial tie-in to downstream sewer)

The environmental survey will include:

- Collect and review existing, publicly available, relevant information regarding environmental natural resources. This information will include U.S. Geological Survey topographic quadrangles and data retrieved from the USGS National Hydrography Dataset, U.S. Fish and Wildlife Service, National Wetland Inventory data, Natural Resources Conservation Service soil maps, and North Carolina Natural Heritage Program data.



- Perform an environmental field review to identify and delineate USACE-regulated jurisdiction streams and wetlands.
- Conduct a habitat survey for federally protected species that have the potential to occur on-site.
- Perform a cultural resources desktop assessment using data from the North Carolina Natural Heritage Program.
- Review potential timing restrictions on construction resulting from the potential occurrence of protected species in or near the project corridor.

TASK 2 ASSUMPTIONS:

- Uninterrupted access to all properties will be provided to allow all survey tasks to be completed on schedule. Access shall include permission to place survey stakes and flagging.
- The environmental survey does not include environmental site assessments for hazardous materials or contamination, or a detailed study of protected plant or cultural resources should they be detected during the field review, or an archaeological survey, or a biological assessment or survey for aquatic or terrestrial animal species.
- Easement maps or other documents do not need to be prepared for CITY owned parcels.
- Easement acquisition services are not included; this includes no appraisals, title searches, property owner meetings, or legal services.

TASK 2 DELIVERABLES:

- Survey maps.

Task 3: Geotechnical

Perform a geotechnical study to determine general soil characteristics and the existence of rock. Perform light clearing of the proposed pipe alignment as required to provide access to the geotechnical drilling equipment. Following the completion of the soil borings, a geotechnical report will be prepared to summarize the field work performed and the laboratory testing. The following soil borings are anticipated based on obtaining full site access.

- Pump Station: 3 soil borings are included, each to a depth of 50 feet. Rock coring will be performed as necessary to reach full depth.
- Pipelines: 10 soil borings are included, spaced approximately every 1,000 feet, each to a depth of 30 feet or auger refusal, whichever is less.

Perform a limited assessment of the concrete piers that support the aerial sewer pipe crossing over Oak Hollow Lake. This will include:

- Excavate around a corner of the base of three piers that are on the lake shore to estimate footing dimensions. If the dimensions of the three piers are consistent, assume that all remaining piers will have the same footing dimensions.

- Perform a GPR scan of three piers that are on the lake shore to estimate the rebar size and spacing. If the scans of the three piers are consistent, assume that all remaining piers will have the same rebar size and spacing.
- Obtain a concrete core from three piers that are on the lake shore to test concrete strength. If the concrete strength of the three piers is consistent, assume that all remaining piers will have the same concrete strength.
- Perform an underwater investigation to visually observe the general conditions of the concrete piers below the water surface.

TASK 3 ASSUMPTIONS:

- Access to all properties will be provided prior to allow the geotechnical task to be completed on schedule. Access shall include permission to perform light clearing of trees and vegetation to access the pump station site and pipe alignment.
- If property owner approval is not provided or field conditions do not allow access, the number of soil borings, their location, and spacing will be adjusted.
- Laboratory analysis does not include testing for corrosivity, contaminated materials, etc., only general soil characteristics.
- Regarding the concrete piers, the following assumptions are made:
 - If the evaluation results of the three piers are consistent, the remaining piers are similar.
 - The subbase material below the pier footings will not be assessed, assume that the material can support the additional weight from the proposed larger sewer pipe.
 - The assessment of the existing piers is limited, CONSULTANT is not liable for differing conditions, components not assessed, or defects not observed as part of the assessment.

TASK 3 DELIVERABLES:

- Geotechnical Report.
- Results of the concrete pier assessment.

Task 4: Final Design

Design the new pump station, gravity sewer, and force main in accordance with the Preliminary Engineering Report (PER). Prepare drawings and technical specifications of the proposed infrastructure for incorporation into the Contract Documents. These documents will be prepared to show the scope, extent, and character of the work to be furnished and performed by the Contractor for the construction of the work elements described. The work will be designed as a single construction project.

The major components of the pump station design include:

- Site civil design, including site grading, erosion and sediment control, and storm water management.
- 5 MGD wet pit pump station with submersible pumps operated with variable frequency drives with soft start backups.

- Influent gravity sewer into the wetwell, coordinated with the design of the upstream gravity sewer replacement.
- Discharge piping inside a below-grade valve vault and an effluent magnetic flow meter.
- Designated site area and electrical connection for future chemical feed system.
- Split face block building with metal roof to house electrical and instrumentation panels and equipment.
- Electrical system for the operation of the facility and an exterior standby diesel generator.
- SCADA system for controlling and monitoring the facility.
- HVAC system for heating and cooling the building.
- Demolition of the existing pump station.

The major sections of pipeline design include:

- Approximately 3,900 linear feet of gravity sewer upstream of the Shadybrook Lift Station.
- Approximately 4,000 linear feet of force main sewer from the Shadybrook Lift Station to the discharge location at the intersection of Westfield Street and Fairmeadow Avenue.
- Approximately 900 linear feet of gravity sewer downstream of the Shadybrook Lift Station through the Oakview Terrace Apartments property.
- Approximately 760 linear feet of gravity sewer downstream of the Shadybrook Lift Station. This is the aerial crossing of Oak Hollow Lake.

During the early stage of the design phase, design criteria will be further developed to expand upon the PER. This includes the electrical system, instrumentation and control system, site security, building architecture and mechanical system, site stormwater management, and an updated site layout using the site survey. A meeting will be held to discuss the design criteria and obtain input from engineering and operations staff before proceeding forward to the 60% design. A brief technical memorandum will summarize the design criteria.

For the aerial crossing of Oak Hollow Lake, using the assessment results in Task 3 of the concrete piers to estimate the concrete thickness, rebar size and layout, footing dimensions, and concrete strength, a structural analysis will be performed on the existing piers. The scope assumes the assessment and structural analysis will conclude that the existing piers can support the weight of the larger pipe and do not need improvement or replacement, only the pipe and the metal saddles will be replaced.

Drawings and specifications will be submitted at the 60% and 90% completion stages for review. An opinion of probable construction cost will be prepared following the 90% design completion. An 'Issued for Bids' set of contract documents will be prepared by incorporating 90% design review comments and comments from regulatory agencies.

TASK 4 ASSUMPTIONS:

- The pump station does not include influent screens or grinders, no odor control system, and no hoist system for removing pumps.



- No offsite utilities are included in the design to extend water, gas, electric, fiber, or other utilities to the pump station site; it's assumed that those utilities exist at the site.
- The concrete piers across the lake can support the weight of the larger pipe, are in good condition, and will be reused without improvement or replacement.
- Comments from the CITY review will be provided in a single, consolidated document. They will not change previous CITY decisions, previous comments, or assumed design acceptance through non-comments on previous documents, submittals, or meetings.

TASK 4 DELIVERABLES:

- 30% Design documents to include the Design Criteria TM and preliminary drawings of the pump station layout and available pipeline drawings.
- 60% Design drawings and specifications.
- 90% Design drawings and specifications.
- 90% Opinion of Probable Construction Cost.
- Issued for Bids drawings and specifications.

Task 5: Permitting

Provide technical criteria, written descriptions, design data, drawings, and specifications for filing applications for permits with the governmental authorities having jurisdiction over the design of the project. The following permits may be required for this Project:

- NCDEQ Authorization to Construct based on the Fast-Track Permit.
- NCDEQ Sediment and Erosion Control.
- USACE Clean Water Act Section 404 Pre-Construction Notification for Stream Crossings and/or Wetlands Disturbance.
 - Activities are anticipated to be authorized under the US Army Corps of Engineers (USACE) Nationwide Permitting program No. 58 (Utility Lines Activities for Water and Other Substances).
- NCDEQ Section 401 Water Quality Certification.
- NCDOT Encroachment Permit.
- City of High Point Site Plan and Watershed Development Plan Approval.
- City of High Point Building Permit submittal. The contractor will be responsible for obtaining the permit.

TASK 5 ASSUMPTIONS:

- Only those permits specifically mentioned are included.
- Permitting review fees for those listed are included. No wetland mitigation fees are included. The contractor will be responsible for the cost of the Building Permit.
- No NEPA/SEPA documentation (i.e. Environmental Assessment) will be required.
- The project will comply with the current USACE's Nationwide Permit conditions and will not require submittal of a Section 404 Individual Permit.
- No field investigations will be required by the State Historic Preservation Office.
- No County or City zoning changes are included.



TASK 5 DELIVERABLES:

- Permit applications.

Task 6: Bidding and Award

Perform the following services related to Bidding and Award of the project for construction:

- Participate in pre-bid meeting.
- Assist with answering bidder questions.
- Assist with preparing addenda as needed to further define or modify the Contract Documents.
- Prepare a bid tabulation and recommendation of the award letter.

TASK 6 ASSUMPTIONS:

- The project will be bid as one or two projects.
- Substitution requests for non-specified equipment and materials will not be evaluated during the bidding phase. Requests made by the selected contractor will be reviewed as part of the future construction phase services task.

TASK 6 DELIVERABLES:

- Addenda.
- Bid tabulation and recommendation of award letter.

Schedule

The scope of services will be completed per the following schedule. Extended review and approval times by City or regulatory agencies, or if easement acquisition is required, could increase the schedule shown. A breakdown of the Task Order schedule by task is shown in Table 1. The schedule assumes a notice-to-proceed in September 2025.

Table 1 Project Schedule

Task	Start Date	Completion Date
Task 1 – Project Management	September 2025	May 2027
Task 2 – Surveying	October 2025	May 2026
Task 3 – Geotechnical	November 2025	April 2026
Task 4 - Design	December 2025	November 2026
Task 5 – Permitting	November 2026	February 2027
Task 6 – Bidding and Award	February 2027	May 2027



Compensation

Compensation to CONSULTANT for the scope of services listed in this Task Order shall be for a lump sum value of \$2,106,000. A breakdown of fees by task is presented in Table 2. Additional and/or optional services will be approved in advance by the CITY.

Table 2 Project Fee

Task	Labor (\$)	Expenses (\$)	Total (\$)
Task 1 – Project Management	\$122,700	\$1,600	\$124,300
Task 2 – Surveying	\$67,200	\$326,700	\$393,900
Task 3 – Geotechnical	\$10,900	\$129,100	\$140,000
Task 4 - Design	\$1,301,700	\$4,000	\$1,305,700
Task 5 – Permitting	\$86,200	\$1,400	\$87,600
Task 6 – Bidding and Award	\$54,400	\$100	\$54,500
Project Total	\$1,643,100	\$462,900	\$2,106,000

CITY OF HIGH POINT

AGENDA ITEM



TITLE: Consideration of a Task Order with HDR Engineering, Inc. - Ward Water Plant Filters Rehabilitation Project

FROM:
Robby Stone
Public Services Director

MEETING DATE:
July 17, 2025

PUBLIC HEARING:
No

ADVERTISED DATE/BY:
N/A

ATTACHMENTS:
1. Scope of Services

PURPOSE: To approve a task order with HDR Engineering Inc. for professional engineering services to perform contract administration and resident project representative for the Ward Water Plant Filters 1-4 Rehab Project. The City has a master agreement for professional services with HDR Engineering, Inc.

BACKGROUND: The Frank L. Ward Wastewater Treatment Plant Filter Rehabilitation Project involves a comprehensive overhaul of Filters 1-4, including the replacement of underdrain systems, valves, and actuators. The project encompasses the demolition of existing filter components, installation of new underdrain systems with air scour piping, and upgrades to valves and actuators in the piping gallery and transfer pump room. Additional improvements include new turbidity sensors and controllers for Filter Nos. 1-8, differential pressure transmitters, water level sensors, and a bubbler system for Filter Nos. 1-4. The project also features the replacement of the backwash water supply line's venturi flow meter with a ball valve and magnetic flow meter, surface preparation and painting of piping and valves, electrical enhancements in the pipe gallery, and the replacement of the concrete walkway between the two filter buildings. The proposed scope of services is to provide contract administration for an 18-month duration and 12-months of a full-time resident project representative.

BUDGET IMPACT: Funds are available in the FY 2025-2026 Budget.

RECOMMENDED ACTION REQUESTED: City Council is requested to consider a task order with HDR Engineering, Inc. in the amount of \$736,500 for professional engineering services for contract administration and resident project representation for the Ward Water Plant Filters Rehabilitation Project and authorize the appropriate City Official(s) to execute all necessary documents.



Supplemental Agreement

Exhibit A

Ward WTP Filter Rehabilitation Project – Construction Administration Services

Introduction

The City of High Point Public Services Department (City) owns and operates the Frank L. Ward Water Treatment Plant (WTP), which was originally constructed in the early 1980s. The WTP has both conventional filters, which were original to the plant construction, and a Greenleaf filter, which was installed in the mid-1990s. This Scope of Services includes construction administration activities to be performed by HDR Engineering, Inc. of the Carolinas (CONSULTANT) for the Frank L. Ward Water Treatment Plant (WTP) Filter Rehabilitation Project.

The project involves the comprehensive rehabilitation of Filter Nos. 1–4, including demolition of existing filter components and installation of new underdrain systems with air scour piping, replacement of valves and actuators in the piping gallery and transfer pump room, and implementation of enhanced instrumentation and controls. Additional improvements include upgrades to turbidity monitoring systems for Filter Nos. 1–8, installation of differential pressure and water level sensors, and a new bubbler system for Filter Nos. 1–4. The project also includes mechanical and structural enhancements such as replacement of the backwash water supply line flow meter, painting of process piping and valves, lighting and electrical upgrades, and reconstruction of the concrete walkway between filter buildings.

Scope of Services

The scope of services herein describes the CONSULTANT's approach to construction administration activities for the Frank L. Ward Water Treatment Plant (WTP) Filter Rehabilitation Project.

Task 1: Construction Phase Services

CONSULTANT will provide construction administration (CA) services during the implementation of the Frank L. Ward Water Treatment Plant (WTP) Filter Rehabilitation Project. The CA services will support the successful execution of construction activities in accordance with the contract documents and project specifications.

The following tasks will be performed:

Subtask 1.1: General Construction Administration and Meetings

The following tasks will be performed:

- **Issue Conformed Construction Documents.** Issue up to five (5) printed copies of Conformed Construction documents (Drawings and Specifications).



- **Preconstruction Meeting.** Conduct a Preconstruction Meeting attended by City, CONSULTANT, Contractor and affected parties, prior to any field construction to establish basic project protocols and procedures. Prepare meeting agenda and produce copies for expected participants for distribution at meeting. Conduct meeting and incorporate meeting discussions in final preconstruction meeting notes. Distribute meeting notes to persons in attendance and to parties on meeting notice list not in attendance.
- **Monthly Construction Progress Meetings.** Schedule, coordinate, and attend monthly construction progress meetings. CONSULTANT and Contractor shall conduct and document monthly construction meetings. CONSULTANT and Contractor shall develop and maintain a participant list for the distribution of the meeting agenda and meeting notes for regular construction progress meetings
- **Additional Meetings.** Conduct conference calls or in-person meetings, as applicable or required, to be attended by City, CONSULTANT, Contractor, and affected parties to address submittal needs and field construction issues that may impact the Project work and schedule. Scope assumes five (5) additional in-person meetings of 2 hours each.
- **Document Management.** Store and maintain applicable project documents digitally and make them accessible to the City and the Contractor. CONSULTANT will deliver applicable project documents electronically to City at closeout of construction.
- **Project Administration.** General project accounting activities including invoicing, and overall project quality assurance and quality control (QA/QC).

SUBTASK 1.1 ASSUMPTIONS:

- It is assumed that the task order duration will be approximately 18 months.
- City shall provide construction materials testing services as required for the project.

SUBTASK 1.1 DELIVERABLES:

- Monthly invoices and progress summaries.

Subtask 1.2: Shop Drawing Submittals

CONSULTANT will review shop drawings, product data, and equipment submittals provided by the Contractor to verify conformance with the design intent and project specifications. Reviews will focus on identifying deviations from the contract documents and ensuring compatibility with the overall system design. Submittals will be logged, reviewed within a mutually agreed-upon timeframe, and returned with appropriate comments or approvals.

The following tasks will be performed:

- Administer shop drawings and other submittal requirements to effect substantial compliance with the intent of the Contract requirements. Distribute for review and redistribute reviewed shop drawings, equipment data sheets, and other submittal information.
- Establish and maintain a tracking system for submittals to provide review action status identification of each submittal as well as submittal distribution status.



- Review or take other appropriate action with respect to shop drawings, samples, and other data which is required to be submitted by the Contractor, but only for conformance with the design concept of the project and compliance with the Contract Documents. Such reviews or other action shall not include means, methods, techniques, sequences, or procedures of construction or safety programs and precautions incident thereto.

SUBTASK 1.2 ASSUMPTIONS:

- The scope assumes 120 submittals, which includes Operation and Maintenance Manuals.
- The scope assumes a maximum of one resubmittal per submittal.

SUBTASK 1.2 DELIVERABLES:

- A copy of each reviewed shop drawing, product data, and equipment submittal.

Subtask 1.3: Resident Project Representative

CONSULTANT shall furnish a Resident Project Representative (“RPR”) to assist CONSULTANT in observing progress and quality of the Work. RPR is CONSULTANT’S representative at the Site, will act as directed by and under the supervision of CONSULTANT, and will confer with CONSULTANT regarding RPR’s actions.

Through RPR’s observations of the Work, including field checks of materials and installed equipment, CONSULTANT shall endeavor to provide further protection for City against defects and deficiencies in the Work. However, CONSULTANT shall not, as a result of such RPR observations of the Work, supervise, direct, or have control over the Work, nor shall CONSULTANT (including the RPR) have authority over or responsibility for the means, methods, techniques, sequences, or procedures of construction selected or used by any Contractor, for security or safety at the Site, for safety precautions and programs incident to the Work or any Contractor’s work in progress, for the coordination of the Contractors’ work or schedules, or for any failure of any Contractor to comply with Laws and Regulations applicable to the performing and furnishing of its work. The CONSULTANT (including RPR) neither guarantees the performances of any Contractor nor assumes responsibility for any Contractor’s failure to furnish and perform the Work, or any portion of the Work, in accordance with the Construction Contract Documents.

The services of a Resident Project Representative (RPR) included in this scope are forty (40) hours per week for a construction duration of twelve (12) months.

SUBTASK 1.3 ASSUMPTIONS:

- The scope is based on providing 12 months of full-time RPR services.

Subtask 1.4: Review Schedule of Values and Monthly Applications for Payment

CONSULTANT will review the Contractor’s Schedule of Values (SOV) for consistency with the contract documents and to ensure appropriate allocation of costs across project components. During construction, CONSULTANT will review monthly Applications for Payment to verify that claimed progress aligns with observed work and approved submittals. Recommendations for payment will be provided to the City based on this review and field verification.



The following tasks will be performed:

- Review the draft schedule of values and work with the Contractor to develop a final schedule of values to be used as the monthly payment application template. The applications will be reviewed and reconciled to reflect actual work progress.
- Make notations of deficient work not recommended for payment until corrected; deletion of payment for stored materials and/or equipment that do not have approved shop drawings and/or proper invoices; reduction of value for partially completed items claimed as complete.
- Review revised applications for payment and, if acceptable, advise the Contractor to submit the required number of copies.
- Execute completed applications for payment, indicating the amount recommended for payment, and transmit to City for payment processing.

SUBTASK 1.4 ASSUMPTIONS:

- The scope assumes the initial SOV and up to 18 monthly applications for payment.

Subtask 1.5: Request for Information (RFIs) Responses and Field Order (FOs) Issuance

CONSULTANT will review and respond to Requests for Information (RFIs) submitted by the Contractor to clarify the intent of the contract documents and support timely construction progress. Responses will be provided in writing and coordinated with the City as needed. When appropriate, CONSULTANT will prepare, and issue Field Orders (FOs) to authorize minor changes in the work that do not affect contract price or time but are necessary to resolve unforeseen conditions or conflicts.

The following tasks will be performed:

- CONSULTANT shall review and respond to Contractor RFIs during construction. Provide coordination and review to identify the need for minor changes in the Work consistent with the design intent, and issue Field Orders to communicate the details of the minor changes involving no change in Contract Time or Contract Price.

SUBTASK 1.5 ASSUMPTIONS:

- The scope assumes up to 60 RFIs.

Subtask 1.6: Change Management

CONSULTANT will support the City in managing changes to the work by reviewing Contractor-proposed change orders for technical accuracy, scope validity, and cost and schedule impacts. CONSULTANT will provide written recommendations to the City regarding acceptance, modification, or rejection of each proposed change. Additionally, CONSULTANT may assist in developing City-initiated changes, including the preparation of supporting documentation such as drawings, technical justifications, and cost estimates.

The following tasks will be performed:

- CONSULTANT shall issue Work Change Directives (WCD's) to Contractor as needed.



- If the Contractor believes they are entitled to compensation for the work described in the WCD, the Contractor shall submit a Change Proposal (CP) with the appropriate documentation to the CONSULTANT for review.
- At the direction of the City, the Contractor shall issue Change Order's (CO), of which one or more approved CPs will serve as back-up documentation.

SUBTASK 1.6 ASSUMPTIONS:

- The scope assumes 20 WCD's and one final CO.

Subtask 1.7: Start-Up, Commissioning, Final Completion

CONSULTANT will provide technical support during start-up and commissioning of the rehabilitated filter systems and associated instrumentation to ensure proper installation and functional performance. CONSULTANT will assist the City in verifying readiness for Final Completion and will participate in final inspections to confirm that the work meets project requirements. Support will also include review of O&M documentation, development of a punch list, and confirmation of Final Completion.

The following tasks will be performed:

- CONSULTANT to assist City in startup of new processes and equipment associated with the project. CONSULTANT will assist City in the planning and coordination of startup.
- CONSULTANT will meet with City and the Contractor for each work element to help develop recommendations and constraints for the Contractor to schedule work such that plant operations are not negatively impacted. Promptly, after notice that the Contractor considers the entire work package/structure (Work) ready for its intended use, in company with City and the Contractor, visit the Site to review the Work and determine the status of completion.
- Follow the procedures in the Construction Contract regarding the preliminary certificate of Final Completion, punch list of items to be completed, City objections, notice to Contractor, and issuance of a final certificate of completion. Assist City regarding any remaining engineering or technical matters affecting City use or occupancy of the Work following Final Completion.

SUBTASK 1.7 ASSUMPTIONS:

- Scope assumes four site visits for start-up, commissioning, and final completion.

Subtask 1.8: Record Drawings

CONSULTANT will prepare record drawings based on Contractor-provided redline markups and verified field changes that occurred during construction. These drawings will reflect the final installed conditions of rehabilitated systems, including filters, piping, valves, instrumentation, and electrical components. Final record drawings will be submitted to the City in both PDF and editable CAD formats upon project closeout.

The following tasks will be performed:



- Throughout the course of the Project, CONSULTANT shall review Contractor as-built drawings to verify the Contract Drawings are up to date with contract modifications and annotated to reflect actual construction. CONSULTANT will notify Contractor in a timely fashion of deficiencies noted and provide follow-up to verify Contractor brings as-recorded drawing status up to date.
- At the completion of the project, CONSULTANT shall prepare two full-size reproducible Record Drawings (and electronic .dwg and .pdf files) showing those changes made during the construction process, based on the marked-up drawings and other data furnished by Contractor.

SUBTASK 1.8 ASSUMPTIONS:

- This proposal does not include any post construction surveys for preparation of the Record Drawings.
- This proposal is based upon the Contractor providing sufficient documentation for development of the Record Drawings.

SUBTASK 1.8 DELIVERABLES:

- Final Record Drawings in PDF and CAD formats.

Subtask 1.9: Controls and I&C Integration at Start-up

- CONSULTANT will review existing filter programming to understand the current backwash sequence and timer settings.
- Following installation of new filter instrumentation, CONSULTANT will confirm new instruments have been reinstalled and checked out correctly by contracted system integrator.
- At filter start-up, CONSULTANT will observe multiple backwashes for each filter as it is reinstated and assist City with adjusting automatic sequencing timers as needed for the new filter underdrain system.

SUBTASK 1.9 ASSUMPTIONS:

- Scope assumes four site visits for this task.

Schedule

The schedule for the services indicated above is approximately 18 months from notice to proceed. However, RPR services will be limited to a duration of 12 months.

Compensation

Compensation to CONSULTANT for the scope of services shall be consistent with the hourly rates set forth in Exhibit A to the Master Agreement for a not-to-exceed value of \$736,500. A breakdown of fees by task is presented in Table 1.

Table 1 Project Fee

Task	Total (\$)
Task 1 – Construction Phase Services	\$736,500
Project Total Fee	\$736,500

CITY OF HIGH POINT

AGENDA ITEM



TITLE: Consideration of a Contract Amendment with Evergreen Solutions

FROM:
Angela Kirkwood
Human Resources Director

MEETING DATE:
July 17, 2025

PUBLIC HEARING:
No

ADVERTISED DATE/BY:
N/A

ATTACHMENTS:
None

PURPOSE: To authorize a contract amendment between Evergreen Solutions and the City of High Point for the completion of Phase II of the Classification & Compensation Study.

BACKGROUND: In 2024, the City of High Point engaged Evergreen Solutions to conduct a comprehensive Classification & Compensation Study. Evergreen Solutions employs a Hybrid Model that evaluates both an employee's time in their current role and overall tenure with the city, in addition to considering relevant market data.

Phase I of the study was completed in fiscal year 2024-25, covering 398 city employees in 138 unique job titles, with the study results effective as of June 29, 2025. This proposed contract amendment will allow Evergreen Solutions to proceed with Phase II for the remaining 1,016 full-time employees in 375 unique job titles.

The studies are essential to ensure both internal equity and external competitiveness in our salary structures. The estimated costs for Phase II are \$117,000.

BUDGET IMPACT: Funds are available in the FY 2025-2026 Budget.

RECOMMENDED ACTION REQUESTED: City Council is requested to consider a contract with Evergreen Solutions in the amount of \$117,000 for the completion of Phase II of the Classification & Compensation Study and authorize the appropriate City Official(s) to execute all necessary documents.

CITY OF HIGH POINT

AGENDA ITEM



TITLE: Consideration of Right of Entry and Release and Deed of No Build Easement

FROM:

Greg Ferguson
Deputy City Manager

MEETING DATE:

July 17, 2025

PUBLIC HEARING:

No

ADVERTISED DATE/BY:

N/A

ATTACHMENTS:

1. Showplace West Picture
 2. Right of Entry and Release
 3. Deed of No Build Easement
-

PURPOSE: To allow for the redevelopment of Showplace West into a mixed-use project with approximately 130 apartment units and approximately 9,000 square feet of commercial space.

BACKGROUND: Showplace West and the City parking deck located at 115 S. Main Street are connected by a concrete structural seal approximately 3–6 feet wide from the ground and running parallel to the top of the parking deck. The developer proposes to remove or modify the seal, to allow light to enter the four-story area contained below, for lighting that would serve the apartments and commercial space.

In connection with the developer's contemplated improvements to the Showplace West Building, the City has been asked not to expand the Parking Deck vertically beyond its current four-story height, such that the developer may satisfy certain North Carolina State Building Code requirements related to the developer's contemplated improvements to the Showplace West Building. City Inspections staff have worked with the developer to address window replacement options and fire code requirements regarding windows and an NFPA sprinkler water curtain to maintain building separation. This is an alternate method that is recognized in the building code that we will be adopting next year. The plan is to replace all the fire-rated wired glass with regular clear tempered glass. A "no build" easement would mean that the city could not replace the parking deck with a taller building within 15 feet and 1 inch. The easement would also follow the sale of the deck if the city sold it. The easement would still allow uses of the top of the deck for recreation, gathering, and other uses as long as they were not constructed in the easement space (15'1").

BUDGET IMPACT: N/A

RECOMMENDED ACTION REQUESTED: City Council is requested to consider a Right of Entry and Release and a Deed of No Build Easement to allow for redevelopment of Showplace West and authorize the appropriate City Official(s) to execute all necessary documents.



Approx. 20'

Seal

Elevator shaft

Deck roof

2nd Stair

RIGHT OF ENTRY AND RELEASE

THIS RIGHT OF ENTRY AND RELEASE (“Agreement”) is made and entered into this _____ (“Effective Date”) by and between the **CITY OF HIGH POINT**, a North Carolina municipal corporation (“City”), **FHP HIGH STREET, LLC**, a North Carolina limited liability company (“FHP High Street”), and **SHOWPLACE WEST LLC**, a Virginia limited liability company (“Showplace West”) (collectively referred to hereinafter as the “Parties” or individually as a “Party”).

WHEREAS, the City wholly owns, operates, and manages that certain off-street public parking facility located at 115 South Main Street in High Point, North Carolina being identified as Parcel Number 171405 (the “City Property”);

WHEREAS, FHP High Street owns that certain parcel of real property located at 101 South Main Street in High Point, North Carolina, being identified as Parcel Number 171404 (the FHP High Street Property”);

WHEREAS, Showplace West, a real estate redevelopment company, has entered into that certain Purchase and Sale Agreement with FHP High Street LLC, dated February 19, 2025, to purchase the FHP High Street Property and to rehabilitate and redevelop the building located thereon for a multi-family or mixed-use community consisting of a number of residential and/or commercial units (the “Project”);

WHEREAS, the City Property and FHP High Street Property are adjacent parcels with only a few feet between the buildings and the property boundary;

WHEREAS, the City has a right of way and easement, granted by Agreement dated March 14, 1983 and recorded in Deed Book 3783, Page 50 of the Guilford County Registry, “to go upon and use that portion of Bank property [the FHP High Street Property] located between the southern line of the Bank building [the FHP High Street Property]...and the southern line of the Bank property, and occupy the air space above the ground between the Bank building and the Bank property line” to structurally seal and enclose that space between the City Property and the FHP High Street Property;

WHEREAS, as part of the Project, FHP High Street and Showplace West desire to eliminate the structural seal, or modify the structural seal to create a light well, between the buildings, and have requested permission of the City to enter the City Property in order to do so; and

WHEREAS, the City is agreeable to the elimination or modification of the structural seal in order to make the Project a success, which will help to rehabilitate the building on the FHP High Street Property, reduce blight, and revitalize the City’s downtown, under terms and conditions set forth below.

NOW, THEREFORE, for and in consideration of the mutual promises, covenants, and agreements contained herein, the Parties agree as follows:

1. Showplace West, its employees, agents, contractors, and assigns, shall have the right of ingress and egress over the City Property during regular business hours, for the purpose of (a) eliminating or modifying the structural seal between the buildings and (b) if needed to limit public

access to the space between the City Property and the FHP High Street Property as further identified on **EXHIBIT A** (attached hereto and incorporated herein by reference), subsequently erecting a fence, wall, or other security enclosure, agreed upon by the Parties. Showplace West, its employees, agents, contractors, and assigns, shall have the right to use tools and equipment related to this work as they deem necessary.

2. FHP High Street, as the current owner of FHP High Street Property, approves and consents to this Agreement and the elimination or modification of the structural seal between the buildings.

3. This Agreement shall begin on the Effective Date and continue through such time that the structural seal is demolished or modified, and the security enclosure is, if necessary, erected.

4. The City shall not be liable for any claims arising out of or resulting from bodily injury, death of any person, or damage to real or tangible, personal property whatsoever that may occur related to this Agreement, and the City is hereby released from all such claims, now or in the future.

5. FHP High Street and Showplace West shall release, indemnify, defend and hold the City, its officers, employees, and agents (collectively, the "Indemnified Parties") harmless from and against any and all claims, damages, liabilities, losses, costs, and expenses, including reasonable attorneys' fees suffered or incurred by any of the Indemnified Parties as a result of any inaction or action taken by the Indemnified Parties. This indemnification extends to, and shall be binding upon, FHP High Street and Showplace West, its successors and permitted assigns, and shall inure to the benefit of, and may be enforced by the City and any other Indemnified Parties, their heirs, successors, and assigns.

6. As applicable, FHP High Street and Showplace West each represent, warrant, and certify to the City that it, and all its subcontractors, shall comply with the requirements of Article 2 of Chapter 64 of the North Carolina General Statutes, and covenants that at all times during this Agreement, it will continue to comply with these requirements.

7. The captions and headings contained in this Agreement are for convenience and reference only, and do not define, describe, extend, or limit the scope or intent of this Agreement or the scope or intent of any provision contained herein.

8. The invalidity of one or more phrases, sentences, clauses, or sections in this Agreement shall not affect the validity of the remaining portions of this Agreement, so long as the material purpose of this Agreement can be determined and effectuated.

9. Any failure by either Party to enforce any of the provisions of this Agreement or to require compliance with any of its terms shall in no way affect the validity of this Agreement, or any part hereof, and shall not be deemed a waiver of the right of such Party thereafter to enforce any such provision.

10. This Agreement may be signed in any number of counterparts, and all such counterparts together shall constitute one and the same instrument. A signed copy of this Agreement delivered by facsimile, email, or other means of electronic transmission shall be deemed to have the same legal effect as delivery of an original signed copy of this Agreement.

11. This Agreement and performance thereof shall be governed, interpreted, construed, and regulated by the laws of the State of North Carolina without giving effect to its principles regarding conflicts of laws. Any legal suit, action, or proceeding arising out of or related to this Agreement shall be instituted exclusively in the courts of North Carolina located in Guilford County, and each Party irrevocably submits to the exclusive jurisdiction of such courts in any such suit, action, or proceeding. Service of process, summons, notice, or other document by mail to such Party's address set forth herein shall be effective service of process for any suit, action, or other proceeding brought in any such court. To the extent permitted by applicable law, if any action, suit, or other legal or administrative proceeding is instituted or commenced by either Party hereto against the other Party arising out of or related to this Agreement, the prevailing Party shall be entitled to recover its reasonable attorneys' fees and court costs from the non-prevailing Party, in addition to any damages and costs otherwise awarded to the prevailing Party.

12. This Agreement is for the sole benefit of the Parties hereto and their respective successors and permitted assigns and nothing herein, express or implied, is intended to or shall confer upon any other person any legal or equitable right, benefit, or remedy of any nature whatsoever, under or by reason of this Agreement. Neither Party may assign, sublet, subcontract, or transfer any interest in this Agreement without the prior written consent of the other Party, consent not to be unreasonably withheld.

13. This Agreement may be amended, modified, or supplemented only by an agreement in writing signed by each Party hereto. No waiver by either Party of any of the provisions hereof shall be effective unless explicitly set forth in writing and signed by the Party so waiving.

14. Any individual executing this Agreement on behalf of the Parties hereby represents and warrants that he or she is, on the date he or she signs this Agreement, is duly authorized by all necessary and appropriate action to execute this Agreement on behalf of the Party and does so with full legal authority.

[Separate signature page to follow.]

IN WITNESS WHEREOF, the Parties have caused this Agreement to be executed on the day and year first above written by their duly authorized representatives.

FHP HIGH STREET LLC

By: _____
Name: _____
Title: _____

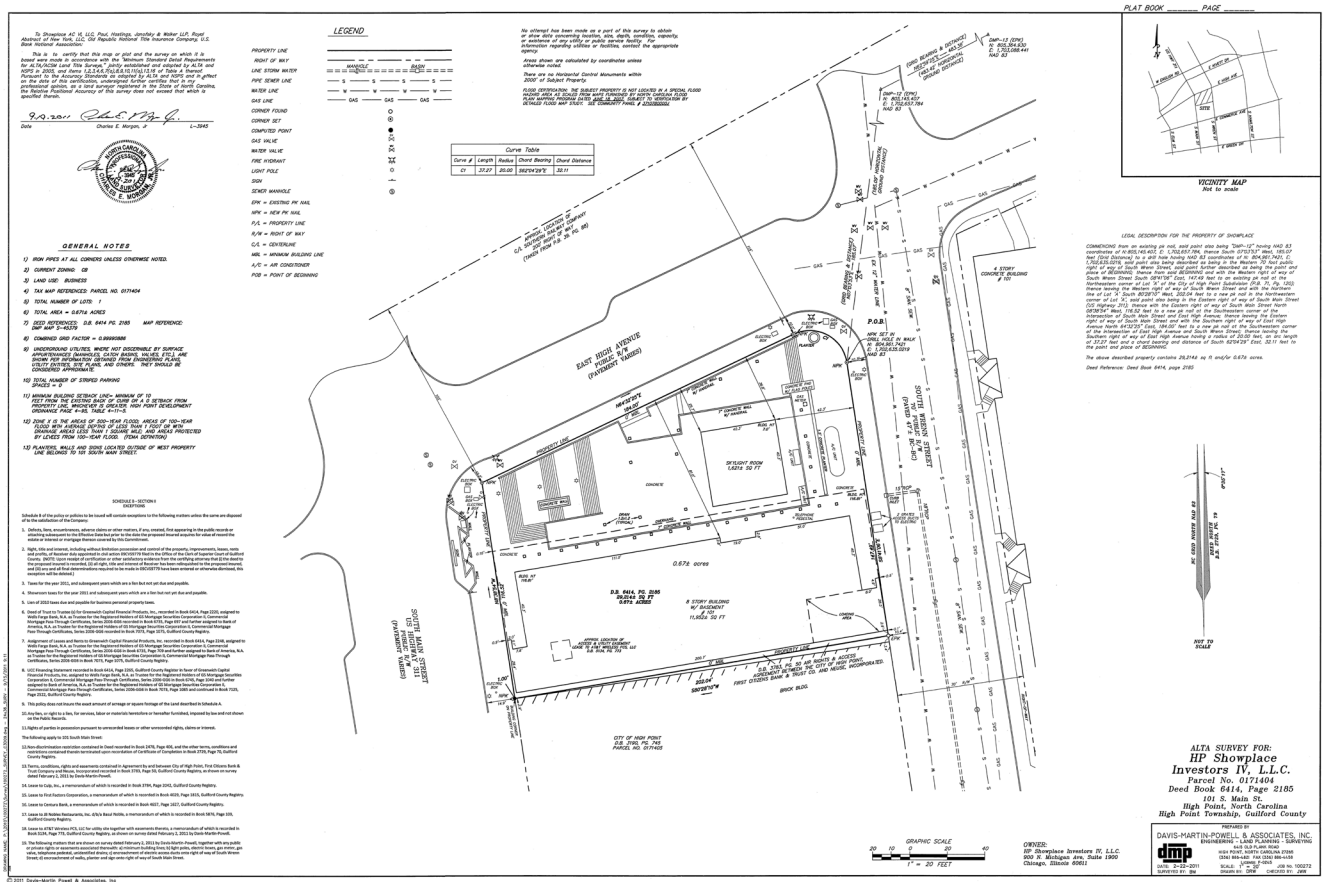
SHOWPLACE WEST LLC

By: _____
Name: _____
Title: _____

CITY OF HIGH POINT

By: _____
Name: _____
Title: _____

Depiction of Site



Prepared by and return to:
City Attorney's Office
City of High Point
PO Box 230
High Point, NC 27261

PINs: 7800-24-5763 and 7800245846

STATE OF NORTH CAROLINA

COUNTY OF GUILFORD

DEED OF NO BUILD EASEMENT

THIS DEED OF NO BUILD EASEMENT, made this _____ day of _____, 2025, (the "Effective Date") by **CITY OF HIGH POINT**, a North Carolina municipal corporation, with a mailing address of PO Box 230, High Point, North Carolina 27261 ("Grantor"), to **SHOWPLACE WEST LLC**, a Virginia limited liability company, with a mailing address of 3230 Queens Grant Drive, Midlothian, VA 23113 ("Grantee").

WHEREAS, Grantor is the owner of the real property described on **Exhibit A** attached hereto, with a street address of 115 South Main Street, High Point, North Carolina ("Grantor Property"), which contains a four-story public parking structure (the "Parking Deck");

WHEREAS, Grantee is the owner of the real property described on **Exhibit B** attached hereto, with a street address of 101 South Main Street, High Point, North Carolina ("Grantee Property"), on which it intends to redevelop the existing eight-story building (the "101 Building") for residential and commercial uses;

WHEREAS, in connection with Grantee's contemplated improvements to the 101 Building, Grantor has been asked not to expand the Parking Deck vertically beyond its current four-story height (the "Maximum Building Height") for fifteen (15) feet one (1) inch from the property line, so that Grantee may satisfy certain North Carolina State Building Code

requirements related to Grantee's contemplated improvements to the 101 Building (the "Building Code Requirements").

NOW THEREFORE, for good and valuable consideration the receipt of which is hereby acknowledged, the parties agree as follows:

1. Grantor does give, grant, sell, and convey unto Grantee for the benefit of the Grantee Property an easement for the purpose of ensuring that the Parking Deck is not expanded beyond the Maximum Building Height for fifteen (15) feet one (1) inch from the property line (the "No Build Easement"). Nothing herein shall be construed to prevent Grantor from altering or improving the Parking Deck, including but not limited to altering or improving the top level of Parking deck for use as an outdoor gathering space, play space and/or sport space, so long as the height of the structure does not exceed the Maximum Building Height for fifteen (15) feet one (1) inch from the property line.
2. The No Build Easement shall be permanent provided, however, that the No Build Easement shall automatically terminate if all of the following conditions are satisfied in the future: (i) the Building Code Requirements are no longer applicable to the 101 Building, (ii) no other rule, ordinance, law, or regulation (including, without limitation, the North Carolina State Building Code, as the same may be amended or otherwise modified from time to time), whether now in existence or hereafter arising, requires the No Build Easement in connection with the ownership or operation of the 101 Building, and (iii) Grantor provides not less than thirty (30) days prior notice to Grantee that the foregoing conditions (i) and (ii) have been satisfied (collectively, the "Termination Conditions").
3. The No Build Easement is subject to all existing easements, restrictions, covenants, encumbrances, and rights-of-way of record.
4. The No Build Easement shall be binding upon and inure to the benefit of the applicable parties hereto and their successors and assigns.

TO HAVE AND TO HOLD the aforesaid No Build Easement and all privileges and appurtenances thereunto belonging to the Grantee, and its successors and assigns. Grantor does warrant and covenant that it is seized of the Grantor Property in fee and has the right to grant and convey the No Build Easement and that it will warrant and defend the said grant of easement against claims of all persons claiming by, through, or under Grantor.

[Signature page follows]

IN WITNESS WHEREOF, Grantor has executed this instrument under seal as of the date set forth below.

CITY OF HIGH POINT,
a North Carolina municipal corporation

By: _____
Name: _____
Its: _____

STATE OF NORTH CAROLINA

COUNTY OF GUILFORD

I certify that the following person(s) personally appeared before me this day, each acknowledging to me that he or she voluntarily signed the foregoing document for the purpose stated therein and in the capacity indicated: _____

Date: _____

Official Signature of Notary: _____

Notary's Printed or Typed Name: _____, Notary Public

My Commission Expires: _____

(Official Seal)

EXHIBIT A

Grantor Property

DRAFT

EXHIBIT B

Grantee Property

DRAFT

CITY OF HIGH POINT

AGENDA ITEM



TITLE: Consideration of a Purchase from Vista Outdoor DBA Kiesler Police Supply

FROM:
Curtis Cheeks III
Chief of Police

MEETING DATE:
July 17, 2025

PUBLIC HEARING:
No

ADVERTISED DATE/BY:
N/A

ATTACHMENTS:

1. Quote
 2. Purchase Memo
 3. Terms and Conditions
 4. Bid Recommendation Form
-

PURPOSE: To request approval to procure training and duty ammunition from Vista Outdoor DBA Kiesler Police Supply not to exceed \$134,763.

BACKGROUND: This ammunition is for the official duty use of the High Point Police Department. Ammunition is available from multiple manufacturers in a variety of bullet weights and configurations, which are periodically evaluated by the Department armorer and firearms instructors.

Vista Outdoor, Law Enforcement distributor in the State of North Carolina, Kiesler Police Supply in Jeffersonville, IN, is currently the only factory-authorized Law Enforcement Distributor in the State of North Carolina for CCI-Speer and Federal Cartridge Company, which Vista Outdoor owns. Kiesler Police Supply is the only authorized Law Enforcement Distributor for drop shipments directly from the factory within North Carolina.

BUDGET IMPACT: Funds are available in the FY 2025-2026 Budget.

RECOMMENDED ACTION REQUESTED: City Council is requested to consider a purchase from Vista Outdoor DBA Kiesler Police Supply in the amount of \$134,763 for training and duty ammunition for Fiscal Year 2025-2026 and authorize the appropriate City Official(s) to execute all necessary documents.

CURTIS CHEEKS III
Chief of Police



PHONE (336) 887-7970
FAX (336) 887-7949
TDD (336) 883-8517

High Point Police Department

June 20, 2025
Kieslers
2802 Sable Mill Road
Jeffersonville, IN. 47130

Dear Sirs,

The High Point Police Department would like to order the following ammunition for the 2025 Fiscal Year. The ammunition is to be delivered on or after July 01, 2025, with payment being made under a City Purchase Order. The PO number is pending.

This ammunition is for the official duty use of the High Point Police Department. We prefer direct shipment from the ammunition manufacturer to the HPPD RFTF at 6011 Riverdale Rd. High Point, NC. 27263. We do have a loading dock and accept palletized shipments.

222 cases of Speer item 53620 (9mm 147 grain TMJ) at \$250.41 per 1000 rd case. \$55,591.20
30 cases of Speer item 53619 (9mm 147 grain GDHP) at \$450.66 per 1000 rd case. \$13,519.80
182 cases of Federal item AE223 (.223 55 grain FMJ) at \$244.10 per 500 rd case. \$44,426.20
20 cases of Speer item 24475 (.223 75 grain GDSP) at \$360.20 per 500 rd case. \$7,204.00
15 cases of Fed item LE132 00 (12-gauge 00 buckshot flite control) at \$216.07 per 250 rd case. \$3,141.05
15 cases of Fed item LEB127 LRS (12-gauge low recoil tru ball slug) at \$223.04 per 250 rd case. \$3,345.60
10 cases of Fed item TGL12 8 (12-gauge 2-3/4 2-3/4DE 1-1/8oz 9) at \$95.20 per 250 rd case. \$952.00
10 cases of Federal item T308T (.308 168 grain) at \$658.31 per 500 rd case. \$6,583.10

Total: \$134,762.95

Sincerely,

A handwritten signature in black ink, appearing to read "Adam Burkholder", with a long horizontal flourish extending to the right.

MPOIII Adam Burkholder
Rangemaster and Lead Firearms Instructor
High Point Police Department
Phone 336-887-7980
adam.burkholder@highpointnc.gov

1730 Westchester Drive • High Point, North Carolina 27262
www.highpointnc.gov/police

Statewide Term Contract

4615A - Ammunition & Firearms

Bid Number	DPC-983753040
Contract Title	Ammunition & Firearms
Effective Dates	May 1, 2024, through April 30, 2029
Awarded Vendor(s) and Contact(s)	AmChar Wholesale Inc. William Hackett (585) 559-6270 Manufacturers: Glock Craig's Firearm Supply Inc. Tony Lardo (865) 388-6337 Manufacturers: Remington, Adam Arms, Angstadt Arms Dana Safety Supply James Panter (336) 897-4055 Manufacturers: Winchester Defender Ammunition Co. Krissy Jones (910) 479-1177 Manufacturers: Defender Authorized Distributors: Defender Distribution LLC FN America Joshua Taylor (803) 766-4181 Manufacturers: FN America Authorized Distributors: Craig's Firearm Supply Inc. Tony Lardo (865) 388-6337 Dana Safety Supply. Neil Doss (336) 685-2595 Kiesler Police Supply Inc. Brittany Girdler (812) 288-5740 Lawmen's Distribution Korry Cole (919) 448-4673 Town Police Supply Nick Horsley (276) 647-4161 Gulf States Distributors Inc. Tommy Trammell (800) 223-7869 Manufacturers: Hornady, PMC, Force on Force Kiesler Police Supply Inc. Brittany Girdler (812) 288-5740 Manufacturers: Federal, Speer Lawmen's Distribution Korry Cole (919) 448-4673 Manufacturers: PMC, Baretta, Colt, LWRCI, Aimpoint, EoTech, Trijicon, Vortex, Surefire, Bianchi, Bulldog Cases & Vaults, Nighstick, Pelican, Pepperball, Safariland, Streamlight PAI Defense Justin Ross (260) 244-4570

	Manufacturers: Bryna, Daniel Defense, Geissele, Heckler Koch, Shadow Systems, EoTech, B&T, KGM Sig Sauer Katie Olivia (603) 610-3826 Manufacturers: Sig Sauer Authorized Distributors: Dana Safety Supply. Neil Doss (336) 685-2595 Lawmen’s Distribution Korry Cole (919) 448-4673 Town Gun Shop Inc. dba Town Police Supply Mark Tosh (800) 752-5580 Manufacturers: Mossburg, Ruger, S&W, RemArms, Benelli																																													
Contract Covers	This contract is intended to cover the state’s normal requirements for ammunition and firearms in the following categories: CATEGORY 1 AMMUNITION; PISTOL (HANDGUN) CATEGORY 2 AMMUNITION; RIFLE CATEGORY 3 AMMUNITION; SHOTGUN CATEGORY 4 AMMUNITION; TRAINING CATEGORY 5 FIREARMS; PISTOL (HANDGUN) CATEGORY 6 FIREARMS; RIFLE CATEGORY 7 FIRARMS; SHOTGUN CATEGORY 8 FIREARMS; OPTICS CATEGORY 9 FIREARMS; SUPPRESSORS CATEGORY 10 FIREARMS; PARTS & ACCESSORIES																																													
Contract Type	This is a mandatory statewide term contract for state agencies, departments, institutions, universities, and community colleges - unless exempted by North Carolina general statute. Non-mandatory entities, including schools and local governments, may use this contract as allowed by general statute.																																													
Special Note	Each firearm shall have an individual serial number engraved and easily readable. Each pistol serial number shall be 100% traceable per requirements by the Bureau of Alcohol, Tobacco, and Firearms and/or other applicable agencies.																																													
Contract Items and Pricing	<table><tr><th>VENDOR</th><th>CATEGORY</th><th>MANUFACTURER</th><th>DISCOUNT</th><th>DELIVERY DAYS</th></tr><tr><td>AmChar Wholesale Inc.</td><td>5</td><td>Glock</td><td>8.9%</td><td>90</td></tr><tr><td>AmChar Wholesale Inc.</td><td>10</td><td>Glock</td><td>23.0%</td><td>90</td></tr><tr><td>Craig’s Firearm Supply</td><td>1, 2, 3</td><td>Remington</td><td>10.0%</td><td>180</td></tr><tr><td>Craig’s Firearm Supply</td><td>6</td><td>Adams Arms</td><td>15.0%</td><td>90</td></tr><tr><td>Craig’s Firearm Supply</td><td>6</td><td>Angstadt Arms</td><td>20.0%</td><td>90</td></tr><tr><td>Dana Safety Supply</td><td>1, 2, 3</td><td>Winchester</td><td>44.0%</td><td>30-120</td></tr><tr><td>Defender Ammunition Co.</td><td>1, 2</td><td>Defender</td><td>30.0-45.0%</td><td>30</td></tr><tr><td>FN America</td><td>5, 6</td><td>FN America</td><td>25.0%</td><td>30-120</td></tr></table>	VENDOR	CATEGORY	MANUFACTURER	DISCOUNT	DELIVERY DAYS	AmChar Wholesale Inc.	5	Glock	8.9%	90	AmChar Wholesale Inc.	10	Glock	23.0%	90	Craig’s Firearm Supply	1, 2, 3	Remington	10.0%	180	Craig’s Firearm Supply	6	Adams Arms	15.0%	90	Craig’s Firearm Supply	6	Angstadt Arms	20.0%	90	Dana Safety Supply	1, 2, 3	Winchester	44.0%	30-120	Defender Ammunition Co.	1, 2	Defender	30.0-45.0%	30	FN America	5, 6	FN America	25.0%	30-120
VENDOR	CATEGORY	MANUFACTURER	DISCOUNT	DELIVERY DAYS																																										
AmChar Wholesale Inc.	5	Glock	8.9%	90																																										
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FN America	10	FN America	15.0%	30-120
Gulf States Distributors	1, 2	Force on Force	17.0%	180
Gulf States Distributors	1, 2	PMC	35.0%	180
Gulf States Distributors	1, 2, 3	Hornady	44.0%	180
Kiesler Police Supply	1, 2, 3	Federal	38.0%	30-365
Kiesler Police Supply	1, 2, 3	Speer	38.0%	30-365
Lawmen's Distribution	3, 4	PMC	0.5%	365
Lawmen's Distribution	5, 6, 7, 10	Baretta	22.6%	180
Lawmen's Distribution	6, 10	Colt	2.6%	180
Lawmen's Distribution	6, 10	LWRCI	2.6%	180
Lawmen's Distribution	8	Aimpoint	23.2%	180
Lawmen's Distribution	8	EoTech	16.1%	180
Lawmen's Distribution	8	Vortex	32.5%	180
Lawmen's Distribution	8, 10	Trijicon	19.6%	180
Lawmen's Distribution	9, 10	Surefire	9.4%	180
Lawmen's Distribution	10	Bianchi	37.0%	180
Lawmen's Distribution	10	Bulldog Cases & Vaults	4.6%	180
Lawmen's Distribution	10	Nightstick	32.2%	180
Lawmen's Distribution	10	Pelican	4.8%	180
Lawmen's Distribution	10	Pepperball	5.1%	180
Lawmen's Distribution	10	Safariland	37.0%	180
Lawmen's Distribution	10	Streamlight	42.0%	180
PAI Defense	4, 10	Bryna	5.0%	120
PAI Defense	5, 6	Daniel Defense	12.0-22.0%	90
PAI Defense	9, 10	Daniel Defense	15.0%	90
PAI Defense	5, 6	Geissele	16.0%	120
PAI Defense	10	Geissele	18.0%	120
PAI Defense	5	Heckler & Koch	25.0%	120
PAI Defense	6	Heckler & Koch	27.0%	120
PAI Defense	10	Heckler & Koch	10.0%	120
PAI Defense	5	Shadow Systems	32.0%	90
PAI Defense	10	EoTech	16.0%	120
PAI Defense	6, 9, 10	B&T	15.0%	120
PAI Defense	9	KGM	15.0%	90
PAI Defense	10	KGM	25.0%	90
Sig Sauer	1	Sig Sauer	5.0%	30
Sig Sauer	5, 6, 8, 9	Sig Sauer	5.0%	90-120
Town Police Supply	5, 6, 10	Mossburg	30.2%	60-100
Town Police Supply	5, 6, 7, 10	Ruger	38.1%	60-100
Town Police Supply	5, 6, 7, 10	S&W	32.3%	60-100
Town Police Supply	6, 7, 10	RemArms	35.1%	60-100

	<table><tr><td>Town Police Supply</td><td>6, 7, 10</td><td>Benelli</td><td>29.6%</td><td>60-100</td></tr></table>	Town Police Supply	6, 7, 10	Benelli	29.6%	60-100
Town Police Supply	6, 7, 10	Benelli	29.6%	60-100		
Delivery Information	The vendor shall deliver Free-On-Board (FOB) destination to all 100 North Carolina counties. All pricing for individual orders of ammunition or firearms should be inclusive of all applicable charges. FOB destination statewide does not include lift-gate or inside delivery. These additional charges will be paid by the agency and added as a separate line on the invoice. For NC Community College Basic Law Enforcement Training (BLET) academies, Bureau of Alcohol, Tobacco, Firearms and Explosives (BATFE) guidance, and the 1968 Gun Control Act require that an eligible college representative complete firearm transfers via form 4473 in person at the Federal Firearms License (FFL) site. Firearms cannot be shipped or delivered directly to your sites. Contact the distributor for specific guidance regarding firearms transfer process requirements for NC CC BLETs. The vendor shall notify the buyer when one or more items in an order cannot be delivered within the time specified. After notification to buyer by vendor of a fulfillment delay of one or more items in the order, the buyer may cancel undelivered items within an order, or an order in its entirety, without penalty or charge, to the extent that the notice of cancellation occurs before buyer is notified that the delayed item or other cancelled items in the order have shipped.					
Return Policy	Vendors shall accept merchandise returns from buyers for a period of thirty (30) business days after delivery. Vendors shall provide full credit or full refund to buyers, whichever a buyer requests, within thirty (30) business days on all returns of an ordered product that is: • A stock item in original packaging and in re-sellable condition • Not a specialty or customized item • Defective or damaged • A return of an incorrectly shipped product • A result of a vendor order entry error Non-conforming due to any other cause is reasonably assumed to be the fault of the vendor. In the event a product is found to be defective, vendors agree to replace the item immediately, within the same delivery time frame, at no additional charge to the state.					
Taxes	Prices do not include North Carolina sales or use tax.					
Instruction and Training	If needed, training shall be coordinated between the buying entity and the awarded vendor. The buying entity shall contact the vendor to arrange training as needed. Vendors may need to provide the following training upon request from the ordering agency. • Basic operator training program for instructor-level staff • Armor-level training, certifying armorers per the awarded manufacturer’s requirements for certification • On-going recertification of the previously trained armorers as per the awarded manufacturer’s requirements All training shall be provided by an authorized factory trained manufacturer’s representative. The manufacturer shall provide all literature and training material required.					
eProcurement	eProcurement					
eProcurement Help Desk	(888) 211-7440					

Contract Manager	Jonathan Davis (984) 236-0225
Contract Attachments	AmChar Wholesale Inc. Craig's Firearm Supply Inc. Dana Safety Supply Defender Ammunition Co. FN America Gulf States Distributors Inc. Kiesler Police Supply Co. Lawmen's Distribution PAI Defense Sig Sauer Town Gun Shop Inc. dba Town Police Supply
Contract Addenda	06/05/2024: Contract Manager changed from Kayla Glenn to Evan Roe 08/07/2024: Defender Ammunition Co. added to contract 08/15/2024: Contract Manager changed to Jonathan Davis

! Law Enforcement, Military & FFL Sales Only

Terms and Conditions

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Quote Terms & Conditions

Quotes are only good for 30 days and are subject to manufacturer price increase. When placing order, please mention you obtained your quote from our website. Thank you for giving Kiesler Police Supply the opportunity to serve you!

Quoted items that are not in stock will be special ordered items and may be subject to backorder at manufacturer's discretion. Price(s) reflected on the quote are good only for the quantity requested by customer in this initial quote request.

Prices, shipping rates, and delivery are subject to change.

Prices are quoted with F.E.T. "IN" - for information for TAX EXEMPT purchases, please call 812-288-5740 for correct paperwork and forms.

NOTICE ON CLOSEOUT/USED ITEMS: KIESLER POLICE SUPPLY DOES NOT WARRANTY USED/CLOSEOUT ITEMS IN ANY FORM DUE TO BREAKDOWN AND THE USED NATURE OF THE ITEMS. KIESLER NOR THE MANUFACTURER COVER ANY FAULTS, DAMAGE, OR LIABILITY FROM THE USE OF USED/CLOSEOUT PRODUCT.

Due to restrictions, Kiesler Police Supply does not quote or sell weapons or ammunition to Alaska, California, Colorado, Connecticut, District of Columbia, Hawaii, Maryland, Massachusetts, New Jersey, New York City, New York State, Rhode Island or Washington state. All sales are subject to state and local laws and restrictions.

Hours of Operation to order:

Monday - Friday

8:00AM - 5:00PM Eastern Standard Time

Customer Service

Contact Kiesler

812.288.5740

1 Law Enforcement/IOP (/outside-inside-le-sales-reps?Purge=True)

2 Government (/government-contact-page?Purge=True)

3 Wholesale (/wholesale-reps?Purge=True)

4 Shipping

0 Operator

service@kiesler.com

812.288.7560 | Sales Fax

2802 Sable Mill Road
Jeffersonville, IN 47130

TERMS AND CONDITIONS (/CART/TERMS-AND-CONDITIONS?PURGE=TRUE)

PRIVACY POLICY (/PRIVACY-POLICY?PURGE=TRUE)

RESOURCES (/RESOURCES)

CAREERS (/RESOURCES/CAREERS?PURGE=TRUE)

EXPORT POLICY AND RESTRICTIONS (/HOME/EXPORT-RESTRICTIONS?PURGE=TRUE)

Law Enforcement, Military and FFL Sales Only

Kiesler Police Supply does not sell to or deal with the civilian market or individuals. Kiesler Police Supply only deals with, issues quotes to, and sells to federal, state, and local law enforcement agencies, individual active duty officers, reserve officers, law enforcement cadets, affiliated government agencies, US military, individual military personnel, retired military with retired i.d., retired law enforcement, federal flight deck officers, qualified DHS/TSA employees, nationally recognized security companies and officers, affiliated training facilities, FFL dealers, active and volunteer firefighters, EMTs, tactical EMTs, paramedics, active duty corrections officers, active duty parole & probations officers, qualified prosecutors, and qualified district attorneys. Due to restrictions, Kiesler Police Supply does not quote or sell weapons, high-capacity magazines, or ammunition to Alaska, California, Colorado, Connecticut, District of Columbia, Hawaii, Massachusetts, New Jersey, Maryland, New York City, New York state, Rhode Island or Washington state. All sales are subject to state and local laws and restrictions. Kiesler Police Supply reserves the right to cancel orders based on eligibility and/or restrictions.

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(<https://www.facebook.com/kieslerspolicesupply/>)

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BID RECOMMENDATION

DEPARTMENT:

COUNCIL AGENDA DATE:

BID NO.: CONTRACT NO.: DATE OPEN:

DESCRIPTION:

To procure training and duty ammunition from Vista Outdoor DBA Kiesler Police Supply not to exceed \$134,763.

PURPOSE:

This ammunition is for the official duty use of the High Point Police Department. Ammunition is available from multiple manufacturers in a variety of bullet weights and configurations, which are periodically evaluated by the Department armorer and firearms instructors.

COMMENTS:

Vista Outdoor, Law Enforcement distributor in the State of North Carolina, Kiesler Police Supply in Jeffersonville, IN, currently is the only factory authorized Law Enforcement Distributor in the State of North Carolina for CCI-Speer and Federal Cartridge Company, which Vista Outdoor owns. Kiesler PS is the only authorized Law Enforcement Distributor for drop shipments directly from the factory with in NC.this quote are "made-to-order".

RECOMMEND AWARD TO: AMOUNT:

JUSTIFICATION:

ACCOUNTING UNIT	ACCOUNT	ACTIVITY	CATEGORY	BUDGETED AMOUNT
101315	526101			\$134,763
TOTAL BUDGETED AMOUNT				\$134,763

DEPARTMENT HEAD: Digitally signed by Curtis H Cheeks III
Date: 2025.07.08 16:32:53 -04'00' DATE:

The Purchasing Division concurs with recommendation submitted by the and recommends award to the lowest responsible, responsive bidder in the amount of .

PURCHASING MANAGER: DATE:

Approved for Submission to Council

FINANCIAL SERVICES DIRECTOR: DATE:

CITY MANAGER: DATE:

(For City Council Approval Only)

CITY OF HIGH POINT

AGENDA ITEM



TITLE: Consideration of a Contract with Mental Health Associates of the Triad

FROM:
Mary Sizemore
Library Director

MEETING DATE:
July 17, 2025

PUBLIC HEARING:
No

ADVERTISED DATE/BY:
N/A

ATTACHMENTS:
None

PURPOSE: To approve a contract with Mental Health Associates of the Triad for social work support services at the High Point Public Library.

BACKGROUND: Mental Health Associates of the Triad began providing social work support services at the High Point Public Library in August 2024. For the past year, the social worker and peer navigator have had over 577 interactions in which they provided employment and housing assistance, as well as guidance in accessing Medicaid/health insurance, retirement, disability, and FNS/SNAP benefits. These are services library staff are not equipped to provide.

BUDGET IMPACT: Funds are available in the FY 2025-2026 Budget.

RECOMMENDED ACTION REQUESTED: City Council is requested to consider a contract with Mental Health Associates of the Triad in the amount of \$156,344.18 for contracted social work support services at the library and authorize the appropriate City Official(s) to execute all necessary documents.

CITY OF HIGH POINT

AGENDA ITEM



TITLE: Consideration of Funding for Outside Non-Profit Organizations - High Point Schools Partnership

FROM:
Stephen Hawryluk
Budget & Performance Director

MEETING DATE:
July 17, 2025

PUBLIC HEARING:
No

ADVERTISED DATE/BY:
N/A

ATTACHMENTS:
None

PURPOSE: To change the nonprofit corporation that the High Point Schools Partnership initiative is affiliated with, from Guilford Education Alliance, Inc. to Resilience High Point, and modify Council's approval of its nonprofit funding.

BACKGROUND: In January 2025, the High Point Schools Partnership, as an affiliate of Guilford Education Alliance, Inc., applied for funds through the City's annual nonprofit funding competitive process. As part of that application, contact and financial information associated with Guilford Education Alliance, Inc. was submitted. In June 2025, the City Council allocated \$15,000 to the High Point Schools Partnership initiative as an affiliate of Guilford Education Alliance, Inc. but has not yet entered into a services contract or disbursed the funds.

On July 1, 2025, the High Point Schools Partnerships initiative changed their nonprofit corporation affiliation from Guilford Education Alliance, Inc. to Resilience High Point. As a result, the City Council needs to modify its approval of the \$15,000 funding allocation to High Point Schools Partnership as an affiliate of Resilience High Point. The services to be provided by the High Point School Partnership initiative in exchange for the funds remain unchanged.

BUDGET IMPACT: There is no additional budget impact.

RECOMMENDED ACTION REQUESTED: City Council is requested to modify its approval of \$15,000 to High Point Schools Partnership as an affiliate of the Resilience High Point.