

ADDENDUM NO. TWO

August 19, 2026

**Project Fast
Shelby-Cleveland County Regional Airport
Shelby, North Carolina
WKD Project No. 20231027.00.CL**

NOTICE TO BIDDERS:

Bidders and other interested parties are informed that the plans for the above referenced project are hereby revised, changed, and supplemented as set forth below:

CLARIFICATION:

1. The Schedule of work has been revised to include the following changes:
 - Item #29 is re-named to: 4-Way Duct Bank (Concrete Encased) per LF
 - Item #30 is new: 4-Way Duct Bank (Non-Concrete Encased) per LF
 - Item #31 is new: Electrical Hand Hole per EA
 - Item #57 is re-named to: Utility - Electrical Power Supply Coordination, Complete per LS
 - Item #58 is new: Utility - Electrical Power Supply Installation, Complete per ALW
 - Item #59 is re-named to: Utility - Gas Extension Coordination, Complete, per LS
 - Item #60 is new: Utility - Gas Extension Installation, Complete per ALW
 - Item #74 is new: Irrigation, Complete per LS
 - Item #75 is new: Sod per SY
 - Item #76 is new: Exterior Wall Mounted Flood Lights, Complete per LS
2. The revised Schedule of Work has been provided in Microsoft Excel format and is included with this Addendum.
3. 4-Way Duct Bank (Non-Concrete Encased) has been added in non-paved areas to connect the concrete-encased duct banks beneath the proposed pavement. The conduits will be used for future communication lines.
4. Utility note #10, addressing the Contractor's responsibilities related to providing power to the new hangar site, has been revised.
5. Utility note #13, addressing the Contractor's responsibilities related to extending natural gas service to the new hangar site, has been revised.
6. A small extension to the existing irrigation system and associated sod installation have been added to the project scope.

7. The installation of exterior floodlights has been added to the project scope at two existing hangars adjacent to the project site. Both hangars are owned by the Airport.
8. The Embankment – Offsite Borrow quantity has been increased due to concerns regarding the Contractor's ability to strip 2 inches of topsoil along the haul route and subsequently excavate 4 inches of suitable material for use as embankment. It is intended that all structural embankment will be off-site borrow.
9. All references in the Bid Documents to State Mix Asphalt S 9.5 B shall be removed and replaced with S 9.5 C.
10. Bollards around sliding gate keypad shall be 4" diameter.
11. For the P-208 aggregate base course material, it should be noted that a supplier can provide information regarding the aggregate properties and gradation for the material. To date, one local supplier has submitted a request letter that has been reviewed and approved.

SPECIFICATIONS:

1. **Bid Forms:** Remove pages B-4 to B-13 of the existing Bid Forms (Schedule of Work) and replace with the attached revised Bid Forms. **NOTE: Pages B-4 to B-14 has been revised,** there are no other changes to the Bid Forms (Bid Forms attached with revised pages B-4 to B-14).
2. **Item T-904, Sodding:** Add this specification in its entirety.

DRAWINGS:

1. Plan Sheet 6 of 35 – Grading, Drainage, and Erosion Control Plan.
Delete this plan sheet and replace with the sheet 6 attached to this addendum.
2. Plan Sheet 16 of 35 – Utility Layout Plan.
Delete this plan sheet and replace with the sheet 16 attached to this addendum.
3. Plan sheet 16A of 35 – Electrical Layout Plan
New sheet - add this sheet in its entirety.
4. Plan Sheet 29 – Utility Details Sheet 2
Delete this plan sheet and replace with the sheet 29 attached to this addendum.
5. Plan Sheet 30 – Utility Details Sheet 3
Delete this plan sheet and replace with the sheet 30 attached to this addendum.

QUESTIONS / RESPONSES:

1. Is the intent for proposed electrical and gas connections to be trenched across or bored under Aviation Dr?

Response: The City of Shelby will be responsible for the relocation and installation of the electrical and gas connections. Allowance pay items have been included in the Schedule of Work to cover these efforts. The City will coordinate the appropriate installation method for the utility crossings.

2. Are electrical plans available? Utility layout not sufficient for electrical lump sum pricing?

Response: The City of Shelby will be responsible for the relocation and installation of the electrical connections, gas connections, and lines associated with this project. Allowance pay items have been included in the Schedule of Work for these efforts; therefore, the Contractor is not expected to provide lump sum pricing for the electrical and gas utility work.

ATTACHMENTS:

- Schedule of work
- Schedule of work – spreadsheet format
- Item T-904, Sodding
- Drawing 6 of 35 - Grading, Drainage, and Erosion Control Plan
- Drawing 16 of 35 – Utility Layout
- Drawing 16A of 35 – Electrical Layout Plan
- Drawing 29 of 35 – Utility Details sheet 2
- Drawing 30 of 35 – Utility Details sheet 3

END OF ADDENDUM NO. TWO

Acknowledgement of receipt of Addendum No. 2 shall be indicated on the bid form.

SCHEDULE OF WORK

Item No. & Spec.	Description and Unit Price in Words	Quantity	Unit	Unit Price	Extended Total
Schedule I					
1 C-105	Mobilization (Max 5% of subtotal) @ (write in words)	1	LS		\$0.00
2 C-100	Contractor Quality Control Program @ (write in words)	1	LS		\$0.00
3 C-102	Temporary Construction Entrance @ (write in words)	1	EA		\$0.00
4 C-102	Temporary Inlet Protection @ (write in words)	7	EA		\$0.00
5 C-102	Temporary Rock Pipe Inlet Protection @ (write in words)	4	EA		\$0.00
6 C-102	Temporary Compost Sock @ (write in words)	495	LF		\$0.00
7 C-102	Temporary Skimmer Basin 1 @ (write in words)	1	LS		\$0.00
8 C-102	Temporary Seeding (Mulched) @ (write in words)	4.0	AC		\$0.00

SCHEDULE OF WORK

Schedule I

9	Erosion Control Matting	<u>2,617</u>	SY		<u>\$0.00</u>
C-102	@ (write in words)				
10	Rip Rap Outlet Protection, Class B (18" Depth)	<u>112</u>	SY		<u>\$0.00</u>
C-102	@ (write in words)				
11	Temporary Silt Fence	<u>5,815</u>	LF		<u>\$0.00</u>
C-102	@ (write in words)				
12	Temporary Silt Fence Outlet	<u>9</u>	EA		<u>\$0.00</u>
C-102	@ (write in words)				
13	Temporary Diversion Ditch	<u>947</u>	LF		<u>\$0.00</u>
C-102	@ (write in words)				
14	18" RCP Class IV	<u>561</u>	LF		<u>\$0.00</u>
D-701	@ (write in words)				
15	24" RCP Class IV	<u>341</u>	LF		<u>\$0.00</u>
D-701	@ (write in words)				
16	30" RCP Class IV	<u>180</u>	LF		<u>\$0.00</u>
D-701	@ (write in words)				

SCHEDULE OF WORK

Schedule I

17	12" HDPE	38	LF		\$0.00
D-701	@ (write in words)				
18	48" Diameter Manholes	7	EA		\$0.00
33 05 13.16	@ (write in words)				
19	60" Diameter Manholes	1	EA		\$0.00
D-751	@ (write in words)				
20	4' x 4' Catch Basin	6	EA		\$0.00
D-751	@ (write in words)				
21	5' x 5' Catch Basin	2	EA		\$0.00
D-751	@ (write in words)				
22	18" Flared End Section	4	EA		\$0.00
D-752	@ (write in words)				
23	24" Flared End Section	3	EA		\$0.00
D-752	@ (write in words)				
24	30" Flared End Section	1	EA		\$0.00
D-752	@ (write in words)				

SCHEDULE OF WORK

Schedule I

25 F-162	Remove Existing 8' Chain Link Fence @ (write in words)	315	LF		\$0.00
26 F-162	8' Chain Link Fence @ (write in words)	198	LF		\$0.00
27 F-162	30' Sliding Gate with Keypad, Complete @ (write in words)	1	LS		\$0.00
28 F-162	18' Manual Swing Gate @ (write in words)	1	EA		\$0.00
29 L-110	4-Way Duct Bank (Concrete Encased) @ (write in words)	491	LF		\$0.00
30 L-110	4-Way Duct Bank (Non-Concrete Encased) @ (write in words)	1,100	LF		\$0.00
31 L-110	Electrical Hand Hole @ (write in words)	14	EA		\$0.00
32 P-101	Remove Concrete Flume @ (write in words)	1	EA		\$0.00

SCHEDULE OF WORK

Schedule I

33 P-101	Remove Existing Asphalt Pavement @ (write in words)	1,141	SY		\$0.00
34 P-101	Remove Existing Concrete Curb and Gutter @ (write in words)	33	LF		\$0.00
35 P-101	Remove Existing Riprap @ (write in words)	12	SY		\$0.00
36 P-101	Remove Existing Flared End Section @ (write in words)	1	EA		\$0.00
37 P-152	Embankment In Place (Onsite) @ (write in words)	3,212	CY		\$0.00
38 P-152	Embankment In Place (Off-Site Borrow) @ (write in words)	2,000	CY		\$0.00
39 P-152	Unsuitable Excavation @ (write in words)	350	CY		\$0.00
40 P-208	Aggregate Base Course @ (write in words)	1,700	CY		\$0.00

SCHEDULE OF WORK

Schedule I

41 P-208	Haul Route Aggregate Base Course (6" Depth) @ (write in words)	<u>865</u>	CY		<u>\$0.00</u>
42 32 12 16	Asphalt Surface Course (S-9.5B) @ (write in words)	<u>1,544</u>	TN		<u>\$0.00</u>
43 P-602	Bituminous Prime Coat @ (write in words)	<u>2,091</u>	GL		<u>\$0.00</u>
44 P-603	Bituminous Tack Coat @ (write in words)	<u>488</u>	GL		<u>\$0.00</u>
45 P-610	8' Wide Concrete Sidewalk @ (write in words)	<u>253</u>	LF		<u>\$0.00</u>
46 P-610	10' Wide Concrete Sidewalk @ (write in words)	<u>200</u>	LF		<u>\$0.00</u>
47 P-610	Concrete 2'-6" Reverse Curb and Gutter @ (write in words)	<u>40</u>	LF		<u>\$0.00</u>
48 P-610	Concrete 2'-6" Standard Curb and Gutter @ (write in words)	<u>174</u>	LF		<u>\$0.00</u>

SCHEDULE OF WORK

Schedule I

49 P-610	Concrete Vertical Curb @ (write in words)	200	LF		\$0.00
50 P-620	Remove Existing Pavement Marking @ (write in words)	54	LF		\$0.00
51 P-620	Permanent Reflectorized Pavement Marking (Yellow) @ (write in words)	305	SF		\$0.00
52 P-620	Permanent Pavement Marking (White) @ (write in words)	135	SF		\$0.00
53 P-620	Handicap Symbol Marking (Blue, White) @ (write in words)	1	EA		\$0.00
54 Plans	ADA Parking Sign @ (write in words)	1	EA		\$0.00
55 T-901	Seeding (Mulched) @ (write in words)	4.0	AC		\$0.00
56 T-905	Topsoil (On-Site Stripping and Final Placement) @ (write in words)	1,500	CY		\$0.00

SCHEDULE OF WORK

Schedule I

57 Spec.	Utility - Electrical Power Supply Coordination, Complete @ (write in words)	1	LS		\$0.00
58 Spec.	Utility - Electrical Power Supply Installation, Complete @ (write in words) One hundred twenty-five thousand dollars	1	ALW	\$125,000.00	\$125,000.00
59 Spec.	Utility - Gas Extension Coordination, Complete @ (write in words)	1	LS		\$0.00
60 Spec.	Utility - Gas Extension Installation, Complete @ (write in words) Twenty-five thousand dollars	1	ALW	\$25,000.00	\$25,000.00
61 33 14 19	Fire Hydrant Assembly Leg and Guard Valve Installation, Complete @ (write in words)	2	EA		\$0.00
62 33 14 19	Yard Hydrant @ (write in words)	1	EA		\$0.00
63 33 14 13	2" Water Service Line (Line, Meter Assembly, Tap) @ (write in words)	25	LF		\$0.00
64 33 14 13	6" CL-52 DIP Water Line @ (write in words)	790	LF		\$0.00

SCHEDULE OF WORK

Schedule I

65	Water Service Line Capping	1	EA		\$0.00
33 05 02	@ (write in words)				
66	Water Service Connection	1	EA		\$0.00
33 05 02	@ (write in words)				
67	Water Meter Adjustment	1	LS		\$0.00
33 05 02	@ (write in words)				
68	Water Valve Adjustment	1	LS		\$0.00
33 05 02	@ (write in words)				
69	Sewer Service Connection	1	EA		\$0.00
33 31 11	@ (write in words)				
70	Sanitary Sewer Service Lateral Cleanout	3	EA		\$0.00
33 31 11	@ (write in words)				
71	4" SDR 21 PVC Gravity Sewer	254	LF		\$0.00
33 31 11	@ (write in words)				
72	8" SDR 21 PVC Gravity Sewer	818	LF		\$0.00
33 31 11	@ (write in words)				

SCHEDULE OF WORK

Schedule I

73	Traffic Control	1	LS		\$0.00
Spec.	@ (write in words)				

74	Irrigation, Complete	1	LS		\$0.00
Spec.	@ (write in words)				

75	Sod	360	SY		\$0.00
T-904	@ (write in words)				

76	Exterior Wall Mounted Flood Lights, Complete	<u>1</u>	LS		<u>\$0.00</u>
Spec.	@ (write in words)				

Schedule I -Total

@ (write in words)

SCHEDULE OF WORK

Schedule I - Total Bid

\$

@ (write in words)

The Owner reserves the right to accept or reject any/all of schedules of work and to include any or all additive items.

For a bid to be considered responsive, the bidder shall provide bid prices for all items and schedules of work.

Overall Contract Time: 120 Calendar Days

Liquidated Damages for Total Contract Time Overrun: \$1,000 per Calendar Day

Date:

Respectfully submitted,

Current Contractor's License

Contractor

No.

Address

By

Print or Type Name

Title:

Acknowledgement of Addendum No. 1

Acknowledgement of Addendum No. 2

Acknowledgement of Addendum No. 3

Acknowledgement of Addendum No. 4

ITEM T-904

SODDING

DESCRIPTION

904-1.1 This item shall consist of furnishing, hauling, and placing approved live sod on prepared areas in accordance with this specification at the locations shown on the plans or as directed by the Engineer.

MATERIALS

904-2.1 Sod. Sod furnished by the Contractor shall have a good cover of living or growing grass. This shall be interpreted to include grass that is seasonally dormant during the cold or dry seasons and capable of renewing growth after the dormant period. All sod shall be obtained from areas where the soil is reasonably fertile and contains a high percentage of loamy topsoil. Sod shall be cut or stripped from living, thickly matted turf relatively free of weeds or other undesirable foreign plants, large stones, roots, or other materials that might be detrimental to the development of the sod or to future maintenance. At least 70% of the plants in the cut sod shall be composed of the species stated in the special provisions, and any vegetation more than 6 inches in height shall be mowed to a height of 3 inches or less before sod is lifted. Sod, including the soil containing the roots and the plant growth showing above, shall be cut uniformly to a thickness not less than that stated in the special provisions.

904-2.2 Lime. Not required.

904-2.3 Fertilizer. Not required.

904-2.4 Water. The water shall be sufficiently free from oil, acid, alkali, salt, or other harmful materials that would inhibit the growth of grass.

904-2.5 Soil for repairs. The soil for fill and topsoiling of areas to be repaired shall be at least of equal quality to that which exists in areas adjacent to the area to be repaired. The soil shall be relatively free from large stones, roots, stumps, or other materials that will interfere with subsequent sowing of seed, compacting, and establishing turf, and shall be approved by the Engineer before being placed.

CONSTRUCTION METHODS

904-3.1 General. Areas to be solid, strip, or spot sodded shall be shown on the plans. Areas requiring special ground surface preparation such as tilling and those areas in a satisfactory condition that are to remain undisturbed shall also be shown on the plans.

Suitable equipment necessary for proper preparation of the ground surface and for the handling and placing of all required materials shall be on hand, in good condition, and shall be approved by the Engineer before the various operations are started. The Contractor shall demonstrate to the Engineer before starting the various operations that the application of required materials will be made at the specified rates.

904-3.2 Preparing the ground surface. After grading of areas has been completed and before applying fertilizer and limestone, areas to be sodded shall be raked or otherwise cleared of stones larger than 2 inches (50 mm) in any diameter, sticks, stumps, and other debris which might interfere with sodding, growth of grasses, or subsequent maintenance of grass-covered areas. If any damage by erosion or other causes occurs after grading of areas and before beginning the application of fertilizer and ground limestone, the Contractor shall repair such damage. This may include filling gullies, smoothing irregularities, and repairing other incidental damage.

904-3.3 Applying fertilizer and ground limestone. Following ground surface preparation, fertilizer shall be uniformly spread at a rate which will provide not less than the minimum quantity of each fertilizer ingredient, as stated in the special provisions. If use of ground limestone is required, it shall then be spread at a rate that will provide not less than the minimum quantity stated in the special provisions. These materials shall be incorporated into the soil to a depth of not less than 2 inches by discing, raking, or other suitable methods. Any stones larger than 2 inches in any diameter, large clods, roots, and other litter brought to the surface by this operation shall be removed.

904-3.4 Obtaining and delivering sod. After inspection and approval of the source of sod by the Engineer, the sod shall be cut with approved sod cutters to such a thickness that after it has been transported and placed on the prepared bed, but before it has been compacted, it shall have a uniform thickness of not less than 2 inches. Sod sections or strips shall be cut in uniform widths, not less than 10 inches, and in lengths of not less than 18 inches, but of such length as may be readily lifted without breaking, tearing, or loss of soil. Where strips are required, the sod must be rolled without damage with the grass folded inside. The Contractor may be required to mow high grass before cutting sod.

The sod shall be transplanted within 24 hours from the time it is stripped, unless circumstances beyond the Contractor's control make storing necessary. In such cases, sod shall be stacked, kept moist, and protected from exposure to the air and sun and shall be kept from freezing. Sod shall be cut and moved only when the soil moisture conditions are such that favorable results can be expected. Where the soil is too dry, approval to cut sod may be granted only after it has been watered sufficiently to moisten the soil to the depth the sod is to be cut.

904-3.5 Laying sod. Sodding shall be performed only during the seasons when satisfactory results can be expected. Frozen sod shall not be used and sod shall not be placed upon frozen soil. Sod may be transplanted during periods of drought with the approval of the Engineer, provided the sod bed is watered to moisten the soil to a depth of at least 4 inches immediately prior to laying the sod.

The sod shall be moist and shall be placed on a moist earth bed. Pitch forks shall not be used to handle sod, and dumping from vehicles shall not be permitted. The sod shall be carefully placed by hand, edge to edge and with staggered joints, in rows at right angles to the slopes, commencing at the base of the area to be sodded and working upward. The sod shall immediately be pressed firmly into contact with the sod bed by tamping or rolling with approved equipment to provide a true and even surface, and ensure knitting without displacement of the sod or deformation of the surfaces of sodded areas. Where the sod may be displaced during sodding operations, the workmen, when replacing it, shall work from ladders or treaded planks to prevent further displacement. Screened soil of good quality shall be used to fill all cracks between sods. The quantity of the fill soil shall not cause smothering of the grass. Where the grades are such that the flow of water will be from paved surfaces across sodded areas, the surface of the soil in the sod after compaction shall be set approximately one inch below the pavement edge. Where the flow will be over the sodded areas and onto the paved surfaces around manholes and inlets, the surface of the soil in the sod after compaction shall be placed flush with pavement edges.

On slopes steeper than one (1) vertical to 2-1/2 horizontal and in v-shaped or flat-bottom ditches or gutters, the sod shall be pegged with wooden pegs not less than 12 inches in length and have a cross-sectional area of not less than 3/4 sq inch. The pegs shall be driven flush with the surface of the sod.

904-3.6 Watering. Adequate water and watering equipment must be on hand before sodding begins, and sod shall be kept moist until it has become established and its continued growth assured. In all cases, watering shall be done in a manner that will avoid erosion from the application of excessive quantities and will avoid damage to the finished surface.

904-3.7 Establishing turf. The Contractor shall provide general care for the sodded areas as soon as the sod has been laid and shall continue until final inspection and acceptance of the work. All sodded areas shall be protected against traffic or other use by warning signs or barricades approved by the Engineer.

The Contractor shall mow the sodded areas with approved mowing equipment, depending upon climatic and growth conditions and the needs for mowing specific areas. Weeds or other undesirable vegetation shall be mowed and the clippings raked and removed from the area.

904-3.8 Repairing. When the surface has become gullied or otherwise damaged during the period covered by this contract, the affected areas shall be repaired to re-establish the grade and the condition of the soil, as directed by the Engineer, and shall then be sodded as specified in paragraph 904-3.5.

METHOD OF MEASUREMENT

904-4.1 This item shall be measured on the basis of the area in square yards (square meters) of the surface covered with sod and accepted.

BASIS OF PAYMENT

904-5.1 This item will be paid for on the basis of the contract unit price per square yard (square meter) for sodding, which price shall be full compensation for all labor, equipment, material, staking, and incidentals necessary to satisfactorily complete the items as specified.

Payment will be made under:

Item T-904-5.1	Sodding - per square yard
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REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

ASTM International (ASTM)

ASTM C602	Standard Specification for Agricultural Liming Materials
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Advisory Circulars (AC)

AC 150/5200-33	Hazardous Wildlife Attractants on or Near Airports
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FAA/United States Department of Agriculture

Wildlife Hazard Management at Airports, A Manual for Airport Personnel
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END OF ITEM T-904

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NOTES:

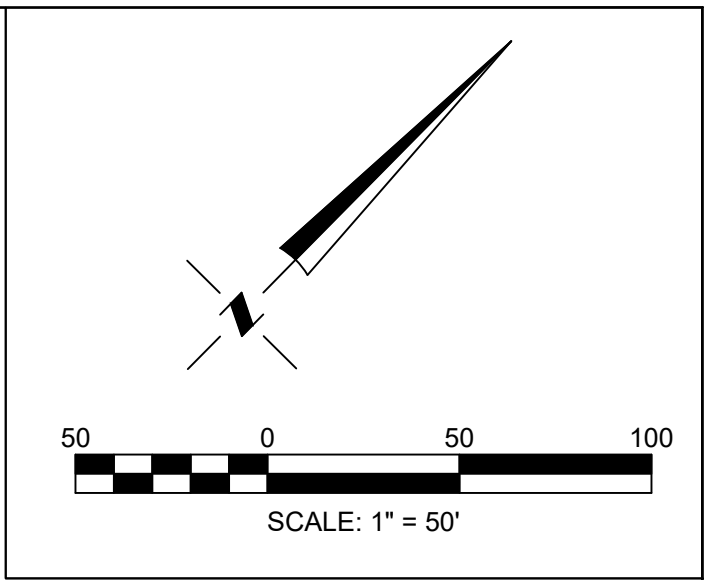
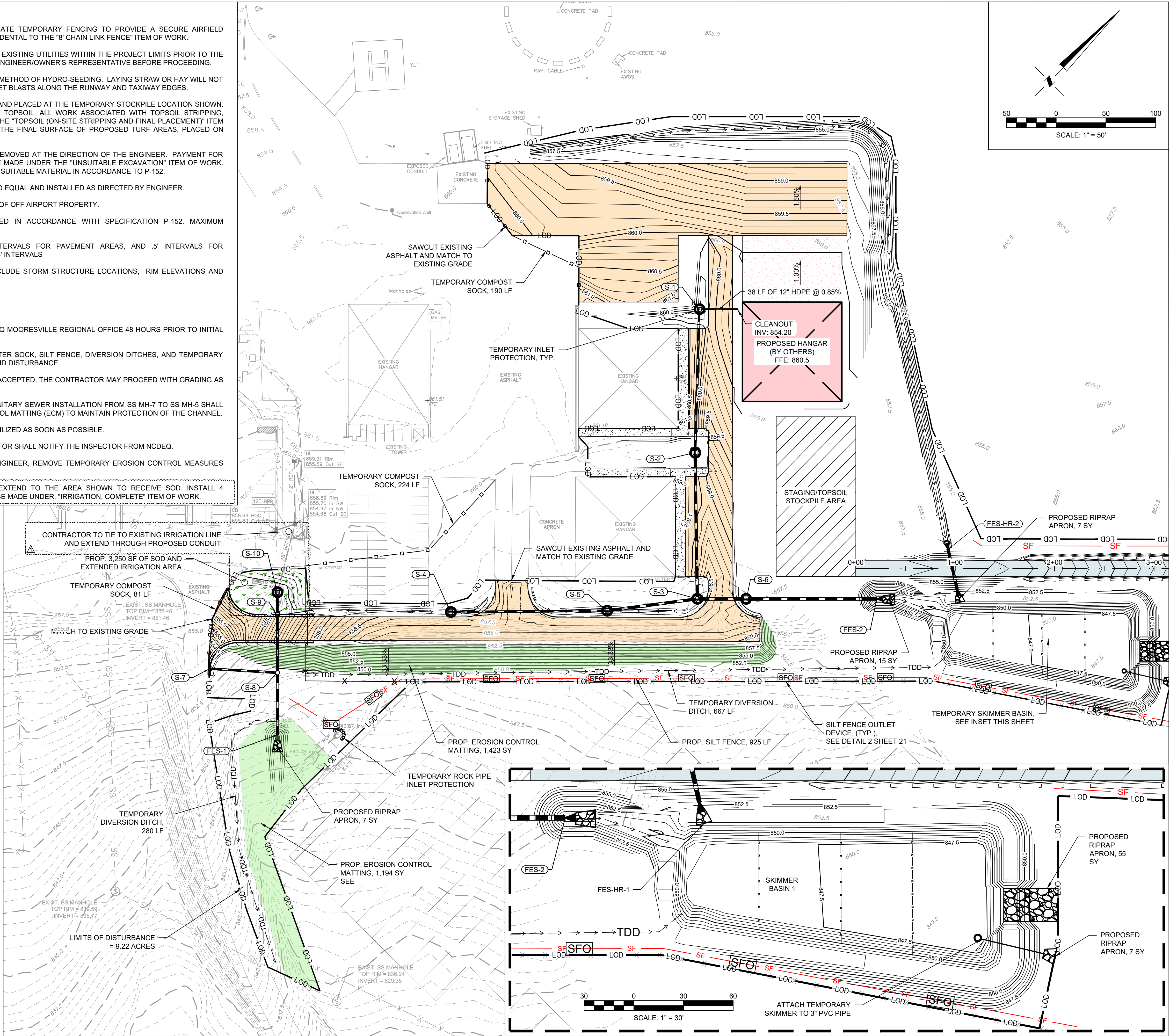
1. CONTRACTOR TO PROVIDE TEMPORARY FENCING AND LOCATE TEMPORARY FENCING TO PROVIDE A SECURE AIRFIELD DURING CONSTRUCTION. TEMPORARY FENCING SHALL BE INCIDENTAL TO THE "8' CHAIN LINK FENCE" ITEM OF WORK.
2. CONTRACTOR SHALL FIELD VERIFY EXACT LOCATIONS OF ALL EXISTING UTILITIES WITHIN THE PROJECT LIMITS PRIOR TO THE START OF CONSTRUCTION. REPORT DISCREPANCIES TO THE ENGINEER/OWNER'S REPRESENTATIVE BEFORE PROCEEDING.
3. SEEDING OF DISTURBED AREAS SHALL BE ACCOMPLISHED BY METHOD OF HYDRO-SEEDING. LAYING STRAW OR HAY WILL NOT BE AN ACCEPTABLE FORM OF MULCHING DUE TO POTENTIAL JET BLASTS ALONG THE RUNWAY AND TAXIWAY EDGES.
4. TOPSOIL WITHIN THE GRADING AREAS SHALL BE STRIPPED 2" AND PLACED AT THE TEMPORARY STOCKPILE LOCATION SHOWN. THERE WILL BE NO SEPARATE PAYMENT FOR RE-HANDLING TOPSOIL. ALL WORK ASSOCIATED WITH TOPSOIL STRIPPING, STOCKPILING AND FINAL PLACEMENT SHALL BE PAID UNDER THE "TOPSOIL (ON-SITE STRIPPING AND FINAL PLACEMENT)" ITEM OF WORK. THE TOPSOIL STRIPPINGS SHALL BE PLACED ON THE FINAL SURFACE OF PROPOSED TURF AREAS, PLACED ON EMBANKMENT SLOPES, OR DISPOSED OF OFF-SITE.
5. SUBGRADE MATERIAL FOUND TO BE UNSUITABLE SHALL BE REMOVED AT THE DIRECTION OF THE ENGINEER. PAYMENT FOR REMOVAL AND BACKFILL OF UNSUITABLE MATERIAL SHALL BE MADE UNDER THE "UNSUITABLE EXCAVATION" ITEM OF WORK. REMOVED UNSUITABLE MATERIAL SHALL BE BACKFILLED WITH SUITABLE MATERIAL IN ACCORDANCE TO P-152.
6. UNDERCUT GEOGRID SHALL BE TENSAR BX 1100 OR APPROVED EQUAL AND INSTALLED AS DIRECTED BY ENGINEER.
7. ALL UNSUITABLE EXCAVATION MATERIAL SHALL BE DISPOSED OF OFF AIRPORT PROPERTY.
8. PROPOSED EMBANKMENT MATERIAL SHALL BE COMPACTED IN ACCORDANCE WITH SPECIFICATION P-152. MAXIMUM EMBANKMENT SLOPE 3:1.
9. PROPOSED GRADING CONTOURS ARE SHOWN IN 0.1' INTERVALS FOR PAVEMENT AREAS, AND .5' INTERVALS FOR NONPAVEMENT AREAS. EXISTING CONTOURS ARE SHOWN IN .5' INTERVALS.
10. SEE SHEET 18 FOR STORM SEWER PIPE PROFILES THAT INCLUDE STORM STRUCTURE LOCATIONS, RIM ELEVATIONS AND STORM PIPE INVERTS.

EROSION CONTROL PHASING SEQUENCE:

1. RECEIVE APPROVAL FROM NCDEQ AND CITY OF SHELBY.
2. CONTRACTOR SHALL NOTIFY THE CITY OF SHELBY AND NCDEQ MOORESVILLE REGIONAL OFFICE 48 HOURS PRIOR TO INITIAL GROUND DISTURBANCE.
3. INSTALL CONSTRUCTION ENTRANCE, INLET PROTECTION, FILTER SOCK, SILT FENCE, DIVERSION DITCHES, AND TEMPORARY BASIN AS SHOWN ON THE PLANS PRIOR TO ANY OTHER GROUND DISTURBANCE.
4. ONCE ALL EROSION CONTROL MEASURES ARE IN PLACE AND ACCEPTED, THE CONTRACTOR MAY PROCEED WITH GRADING AS SHOWN ON THE PLANS.
5. PRIOR TO INSTALLATION OF FES-1, S-7, S-8, S-9, AND S-10, SANITARY SEWER INSTALLATION FROM SS MH-7 TO SS MH-5 SHALL BE INSTALLED AND IMMEDIATELY LINED WITH EROSION CONTROL MATTING (ECM) TO MAINTAIN PROTECTION OF THE CHANNEL.
6. DISTURBED AREAS BROUGHT TO FINAL GRADE SHALL BE STABILIZED AS SOON AS POSSIBLE.
7. ONCE THE DISTURBED AREAS ARE STABILIZED, THE CONTRACTOR SHALL NOTIFY THE INSPECTOR FROM NCDEQ.
8. UPON APPROVAL FROM THE NCDEQ INSPECTOR AND THE ENGINEER, REMOVE TEMPORARY EROSION CONTROL MEASURES AND STABILIZE ANY EXPOSED BARE EARTH.
9. CONTRACTOR SHALL TIE INTO EXISTING IRRIGATION AND EXTEND TO THE AREA SHOWN TO RECEIVE SOD. INSTALL 4 SPRINKLERS IN THIS AREA. PAYMENT FOR IRRIGATION SHALL BE MADE UNDER "IRRIGATION, COMPLETE" ITEM OF WORK.

LEGEND

- PROPOSED BITUMINOUS PAVEMENT
- PROPOSED HAUL ROUTE
- PROPOSED HANGAR BY OTHERS
- PROPOSED CONCRETE APRON BY OTHERS
- TEMPORARY INLET PROTECTION
- TEMPORARY ROCK PIPE INLET PROTECTION
- TEMPORARY DIVERSION DITCH
- DROP INLET/CATCH BASIN
- FLARED END SECTION
- LIMITS OF DISTURBANCE
- TEMPORARY SILT FENCE
- TEMPORARY COMPOST SOCK PERIMETER PROTECTION
- STORM DRAINAGE PIPE
- CHANNEL FLOW DIRECTION
- EROSION CONTROL MATTING
- SOD AND IRRIGATION AREA
- RIPRAP OUTLET PROTECTION
- SILT FENCE OUTLET



ARDURRA
ARDURRA GROUP NORTH CAROLINA
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CHARLOTTE, NC 28208
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www.ardurra.com
NC LICENSE NO. F-0374

PROFESSIONAL SEAL

REVISION RECORD	
NO.	DESCRIPTION
1	ADDENDUM NO.2
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PROJECT NAME: PROJECT FAST FOR SHELBY-CLEVELAND COUNTY REGIONAL AIRPORT (EHO) SHELBY, NORTH CAROLINA
DRAWING TITLE: GRADING, DRAINAGE & EROSION CONTROL PLAN

PROJ. MGR.: GMK
DESIGN BY: MH
DRAWN BY: MH
PROJ. DATE: AUGUST 2026
DRAWING NUMBER:

6 OF 35
ARDURRA PROJ. NO.: 20231027.00.CL

BID DOCUMENTS - DO NOT USE FOR CONSTRUCTION

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UTILITY NOTES:

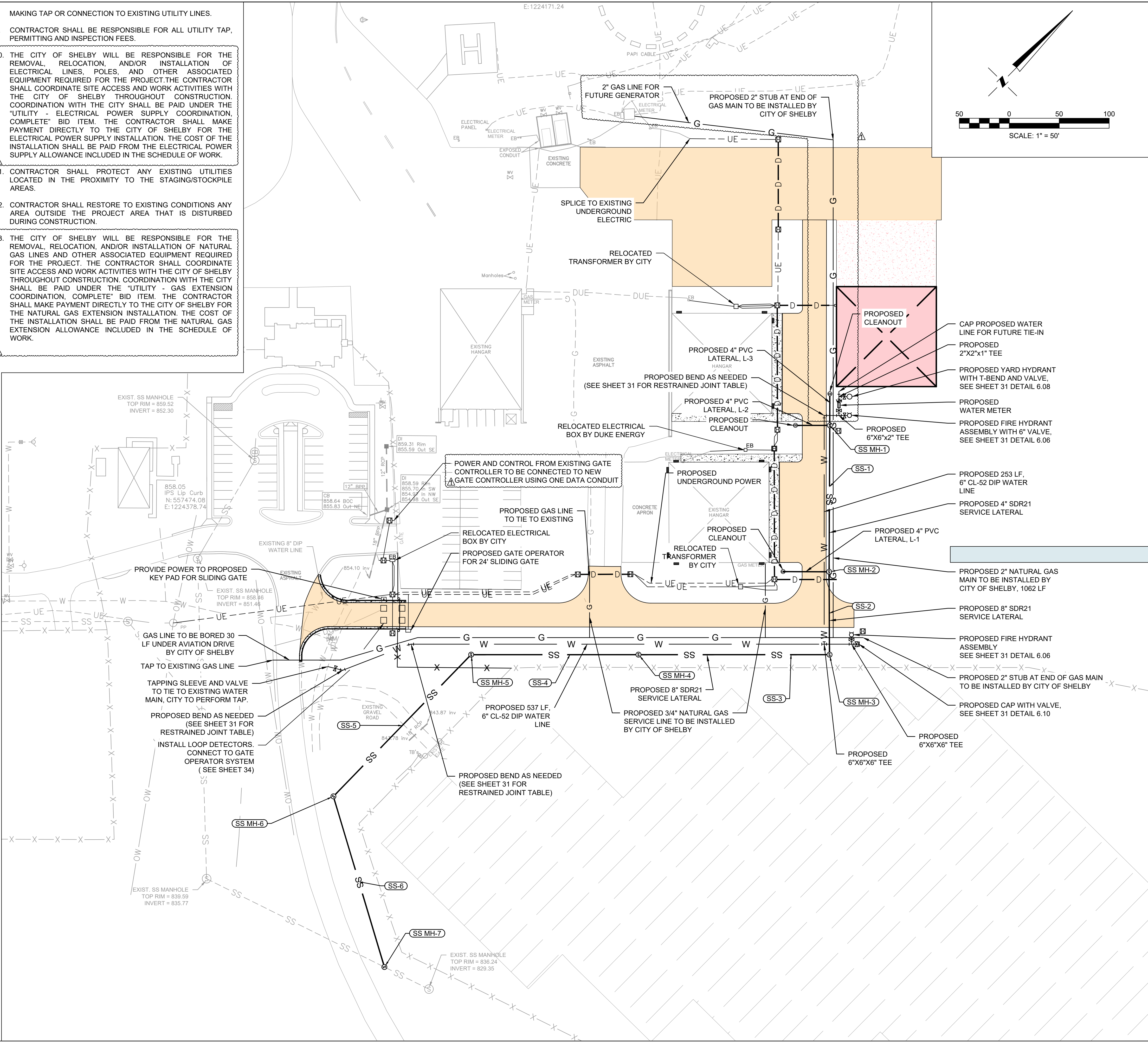
1. THE UTILITIES AND THE LOCATIONS THEREOF, SHOWN ON THE DRAWING, REPRESENT THE DESIGNER'S UNDERSTANDING OF EXISTING UTILITIES IN THE CONSTRUCTION AREA. THE CONTRACTOR SHALL VERIFY THE LOCATION, DEPTH AND EXISTENCE OF ALL UTILITIES (ELECTRICAL, MECHANICAL, WATER, TELEPHONE, GAS, ETC.) WITHIN THE CONSTRUCTION AREA WITH THE APPROPRIATE UTILITY COMPANY PRIOR TO BEGINNING ANY EXCAVATION. THE OMISSION OF OR THE INCLUSION OF UTILITY LOCATIONS ON THE PLANS IS NOT TO BE CONSIDERED AS THE NONEXISTENCE OF OR A DEFINITE LOCATION OF EXISTING UNDERGROUND UTILITIES. ANY DAMAGE TO EXISTING UTILITIES SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE. THE CONTRACTOR SHALL ANTICIPATE PRIVATE UTILITY LOCATES TO LOCATE EXISTING UTILITIES.
 2. CONTRACTOR TO COORDINATE WITH OTHER UTILITY COMPANIES TO PREVENT CONFLICTS (I.E., PIPE CROSSINGS) WHEN LAYING PIPE.
 3. CONTRACTOR TO COORDINATE ANY UTILITY CONFLICTS WITH THE APPROPRIATE UTILITY DEPARTMENT.
 4. USE WYES, BENDS & TEES AS NECESSARY FOR UTILITY CONSTRUCTION AND CONNECTION TO EXISTING SYSTEM. ALL FITTINGS ARE INCIDENTAL TO LINE WORK.
- MINIMUM COVER OVER ALL WATER LINES IS TO BE 36".
- MINIMUM SEPARATION DISTANCES FOR SANITARY SEWER LINES FROM:
- A. WATER LINES - 18" VERTICAL AND 10' HORIZONTAL
 - B. STORM SEWERS - 24" VERTICAL
5. D.I.P. WITH MECHANICAL JOINT ENDS MAY BE SUBSTITUTED WHERE SEPARATION DISTANCES BETWEEN THE SANITARY SEWER LINE AND WATER LINE OR STORM SEWER CANNOT BE MAINTAINED. PIPE MUST BE LAID SUCH THAT FULL SECTIONS OF PIPE ARE CENTERED ON THE CROSSING POINT & EXTEND A DISTANCE OF 10' ON EACH SIDE OF THE POINT OF CROSSING. CONTACT THE ENGINEER FOR DIRECTION WHERE WATERLINE IS REQUIRED TO CROSS BELOW SANITARY SEWER LINES. CONTACT ENGINEER FOR DIRECTION WHERE SEPARATION BETWEEN WATER AND SEWER CANNOT BE MAINTAINED.
 6. ALL WATER LINE CONSTRUCTION SHALL BE IN ACCORDANCE WITH REQUIREMENTS AND SPECIFICATIONS OF THE CITY OF SHELBY.
 7. ALL SANITARY SEWER LINE CONSTRUCTION SHALL BE IN ACCORDANCE WITH REQUIREMENTS AND SPECIFICATIONS OF THE CITY OF SHELBY.
 8. CONTRACTOR SHALL NOTIFY APPROPRIATE AGENCY PRIOR TO

SANITARY SEWER STRUCTURE TABLE			
NAME	RIM ELEVATION	NORTHING EASTING	TYPE
SS MH-1	RIM: 859.71	N: 557924.9820 E: 1224693.2997	4' DIAM. MANHOLE
SS MH-2	RIM: 858.12	N: 557820.1088 E: 1224795.7127	4' DIAM. MANHOLE
SS MH-3	RIM: 852.02	N: 557761.3759 E: 1224854.1723	4' DIAM. MANHOLE
SS MH-4	RIM: 850.54	N: 557627.0806 E: 1224717.9421	4' DIAM. MANHOLE
SS MH-5	RIM: 850.38	N: 557509.4591 E: 1224598.6376	4' DIAM. MANHOLE
SS MH-6	RIM: 844.36	N: 557311.6476 E: 1224600.0397	4' DIAM. MANHOLE
SS MH-7	RIM: 836.78	N: 557225.8621 E: 1224756.2908	4' DIAM. MANHOLE

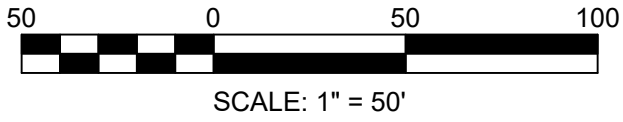
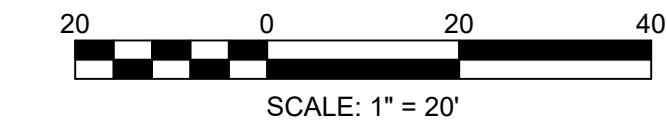
SANITARY SEWER PIPE TABLE				
PIPE NAME	TYPE	INVERTS	LENGTH	SLOPE
L-1	4" PVC LATERAL	INV IN: 848.31 INV OUT: 847.85	46	1.00%
L-2	4" PVC LATERAL	INV IN: 851.10 INV OUT: 850.78	32	1.00%
L-3	4" PVC LATERAL	INV IN: 851.07 INV OUT: 850.78	29	1.00%
SS-1	4" SDR21	INV IN: 850.68 INV OUT: 847.75	147	2.00%
SS-2	8" SDR21	INV IN: 847.75 INV OUT: 839.50	83	9.95%
SS-3	8" SDR21	INV IN: 839.65 INV OUT: 837.74	191	1.00%
SS-4	8" SDR21	INV IN: 837.64 INV OUT: 835.96	168	1.00%
SS-5	8" SDR21	INV IN: 835.86 INV OUT: 833.88	198	1.00%
SS-6	8" SDR21	INV IN: 833.78 INV OUT: 832.00	178	1.00%

- MAKING TAP OR CONNECTION TO EXISTING UTILITY LINES.
9. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL UTILITY TAP, PERMITTING AND INSPECTION FEES.

10. THE CITY OF SHELBY WILL BE RESPONSIBLE FOR THE REMOVAL, RELOCATION, AND/OR INSTALLATION OF ELECTRICAL LINES, POLES, AND OTHER ASSOCIATED EQUIPMENT REQUIRED FOR THE PROJECT. THE CONTRACTOR SHALL COORDINATE SITE ACCESS AND WORK ACTIVITIES WITH THE CITY OF SHELBY THROUGHOUT CONSTRUCTION. COORDINATION WITH THE CITY SHALL BE PAID UNDER THE "UTILITY - ELECTRICAL POWER SUPPLY COORDINATION, COMPLETE" BID ITEM. THE CONTRACTOR SHALL MAKE PAYMENT DIRECTLY TO THE CITY OF SHELBY FOR THE ELECTRICAL POWER SUPPLY INSTALLATION. THE COST OF THE INSTALLATION SHALL BE PAID FROM THE ELECTRICAL POWER SUPPLY ALLOWANCE INCLUDED IN THE SCHEDULE OF WORK.
11. CONTRACTOR SHALL PROTECT ANY EXISTING UTILITIES LOCATED IN THE PROXIMITY TO THE STAGING/STOCKPILE AREAS.
12. CONTRACTOR SHALL RESTORE TO EXISTING CONDITIONS ANY AREA OUTSIDE THE PROJECT AREA THAT IS DISTURBED DURING CONSTRUCTION.
13. THE CITY OF SHELBY WILL BE RESPONSIBLE FOR THE REMOVAL, RELOCATION, AND/OR INSTALLATION OF NATURAL GAS LINES AND OTHER ASSOCIATED EQUIPMENT REQUIRED FOR THE PROJECT. THE CONTRACTOR SHALL COORDINATE SITE ACCESS AND WORK ACTIVITIES WITH THE CITY OF SHELBY THROUGHOUT CONSTRUCTION. COORDINATION WITH THE CITY SHALL BE PAID UNDER THE "UTILITY - GAS EXTENSION COORDINATION, COMPLETE" BID ITEM. THE CONTRACTOR SHALL MAKE PAYMENT DIRECTLY TO THE CITY OF SHELBY FOR THE NATURAL GAS EXTENSION INSTALLATION. THE COST OF THE INSTALLATION SHALL BE PAID FROM THE NATURAL GAS EXTENSION ALLOWANCE INCLUDED IN THE SCHEDULE OF WORK.



1. EXTERIOR LIGHTING SHALL CONSIST OF 150 WATT - 5000K - 21,000 LUMIN WALL MOUNTED FLOOD LIGHTS.
2. FLOOD LIGHTS SHALL BE POWERED FROM THE INDIVIDUAL HANGARS.
3. PAYMENT FOR THE EXTERIOR WALL MOUNTED FLOOD LIGHTS SHALL BE MADE UNDER THE "EXTERIOR WALL MOUNTED FLOOD LIGHTS, COMPLETE" ITEM OF WORK.

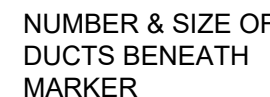
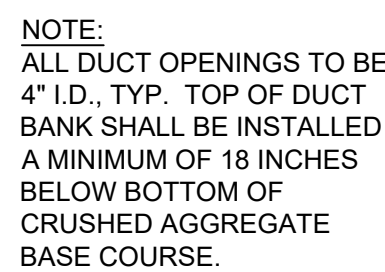


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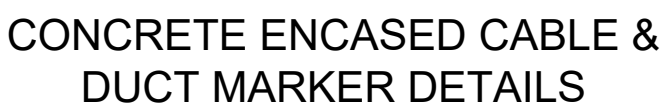
[illegible]



1. CLEAN OUT PIPE AND FITTINGS SHALL BE THE SAME DIAMETER AND MATERIAL AS THE SERVICE LATERAL.
2. PROVIDE CLEAN-OUTS WHERE INDICATED ON THE PLANS.
3. D.I.P. CLEAN-OUTS SHALL HAVE BRONZE-THREADED CLEAN OUT PLUG.
4. WHERE CLEAN-OUTS ARE INSTALLED ON PIPING UNDER PRESSURE, ALL JOINTS SHALL HAVE RETAINER GLANDS OR OTHER APPROVED METHOD OF RESTRAINT. ALL RUBBER PAKS, FITTINGS AND CLEAN OUT PLUG SHALL BE WATERTIGHT AND RATED FOR THE PRESSURES PRESENT AT THE PARTICULAR POINT OF INSTALLATION.

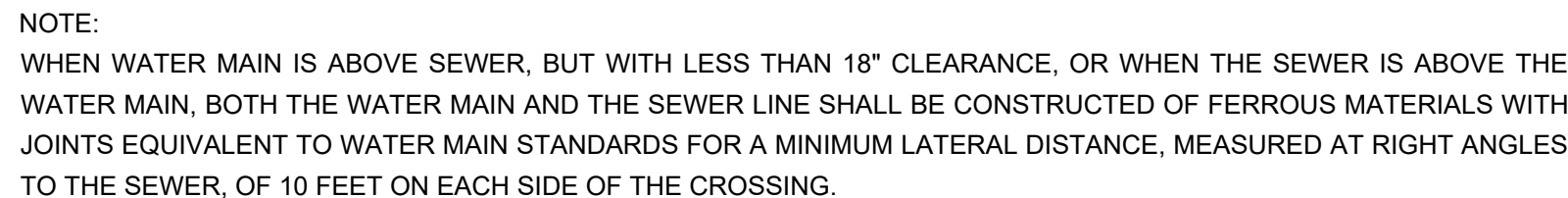


- NOTES:
1. LETTER STROKES TO BE 1/2" WIDE AND 1/4" DEEP.
 2. NO SEPARATE PAYMENT FOR CONCRETE MARKERS. THEY ARE INCIDENTAL TO ASSOCIATED PAY ITEM.



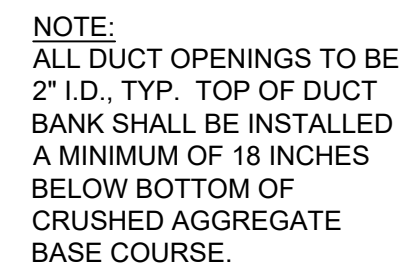
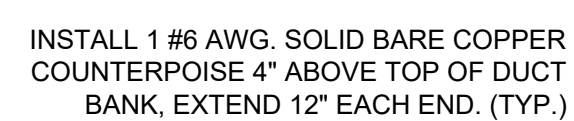
SECTION A-A

NOT TO SCALE



RELATION OF WATER MAINS TO SEWER MAINS

NOT TO SCALE



DUCT SECTION
(NON-CONCRETE ENCASED)

NOT TO SCALE

[illegible]

PROJECT NAME: PROJECT FAST
FOR
SHELBY-CLEVELAND COUNTY REGIONAL AIRPORT (EHO)
SHELBY, NORTH CAROLINA

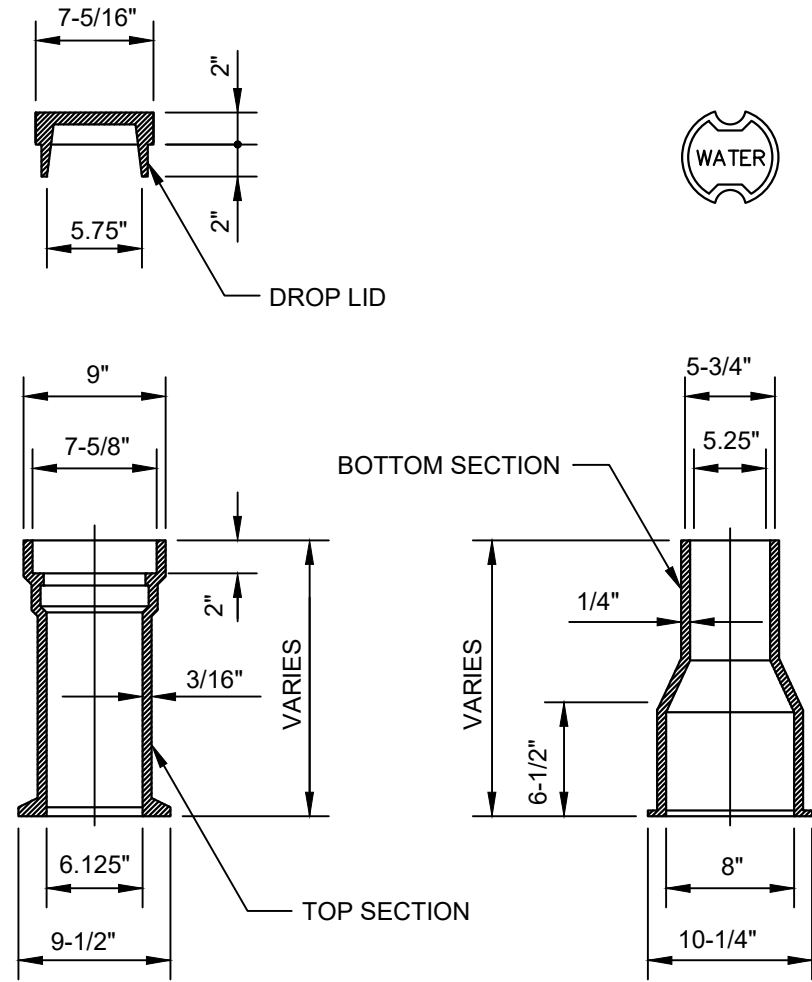
DRAWING TITLE: UTILITY DETAILS SHEET - 2

PROJ. MGR.:	GMK
DESIGN BY:	MH
DRAWN BY:	MH
PROJ. DATE:	AUGUST 2026
DRAWING NUMBER:	

29 OF 35

ARDURRA PROJ. NO.:

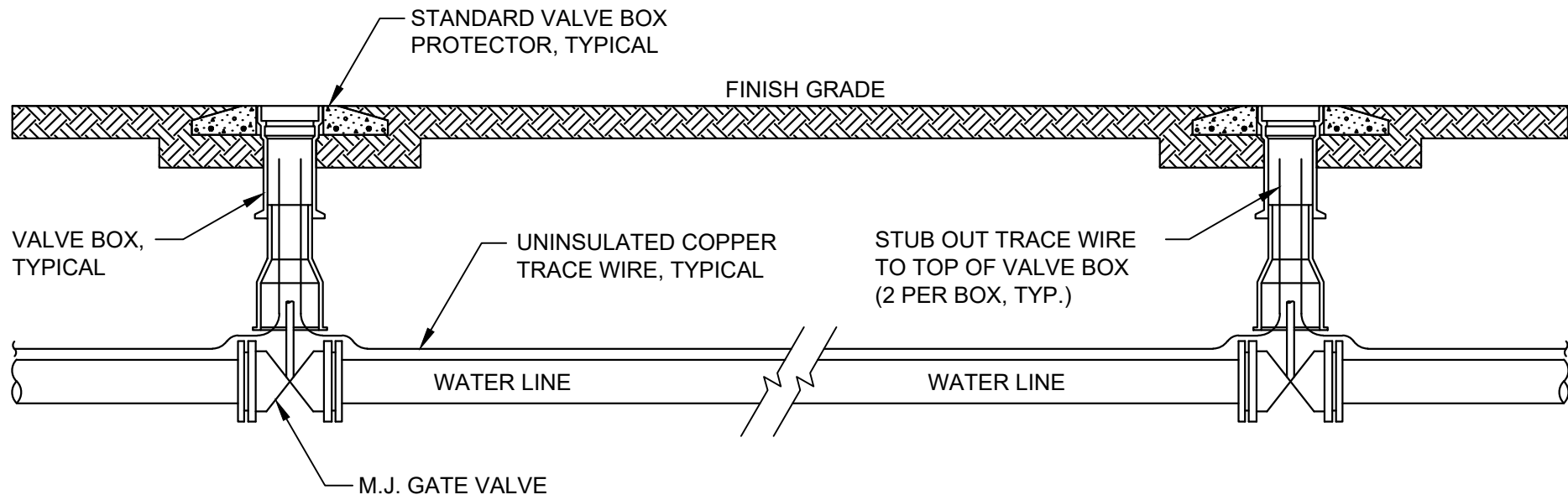
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NOTES:

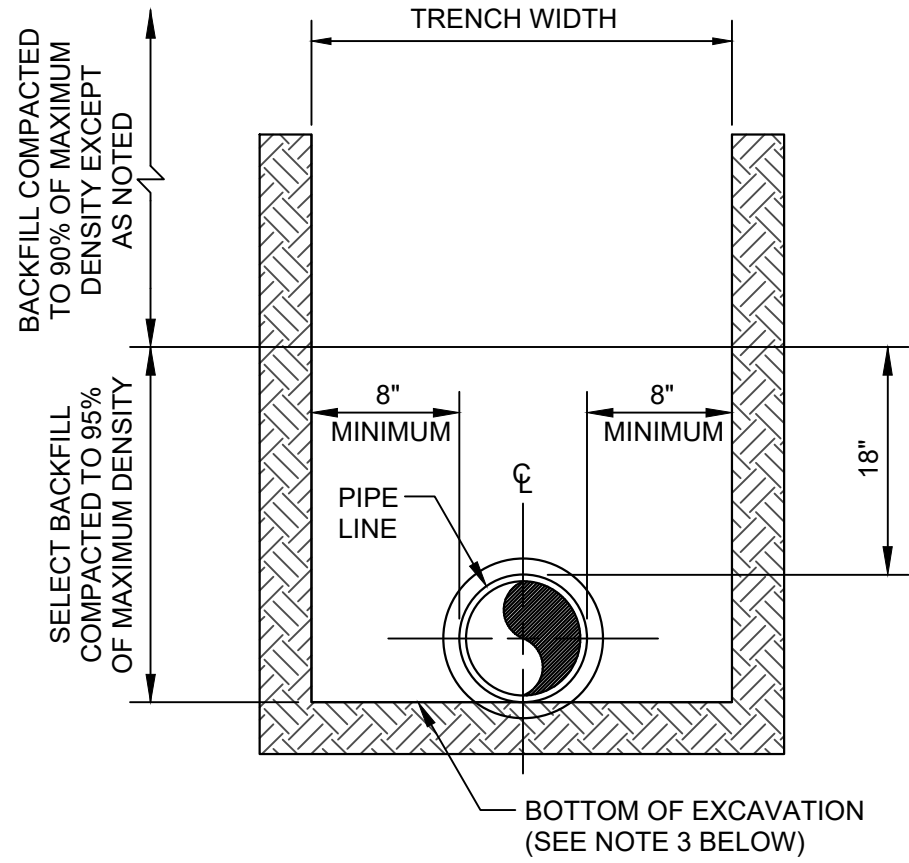
- LID CASTING TO BE TYLER MANUFACTURE NO. 6850-SERIES, 5-1/4" DROP LID OR APPROVED EQUAL.
- BODY CASTING TO BE TYLER MANUFACTURE NO. 6855-SERIES, 5-1/4" SHAFT, SLIP OR SCREW TYPE, OR APPROVED EQUAL.
- THIS VALVE BOX ACCOMMODATES 4" THRU 12" VALVES.

1 STANDARD THREE PIECE VALVE BOX
NOT TO SCALE



SECTION/ELEVATION

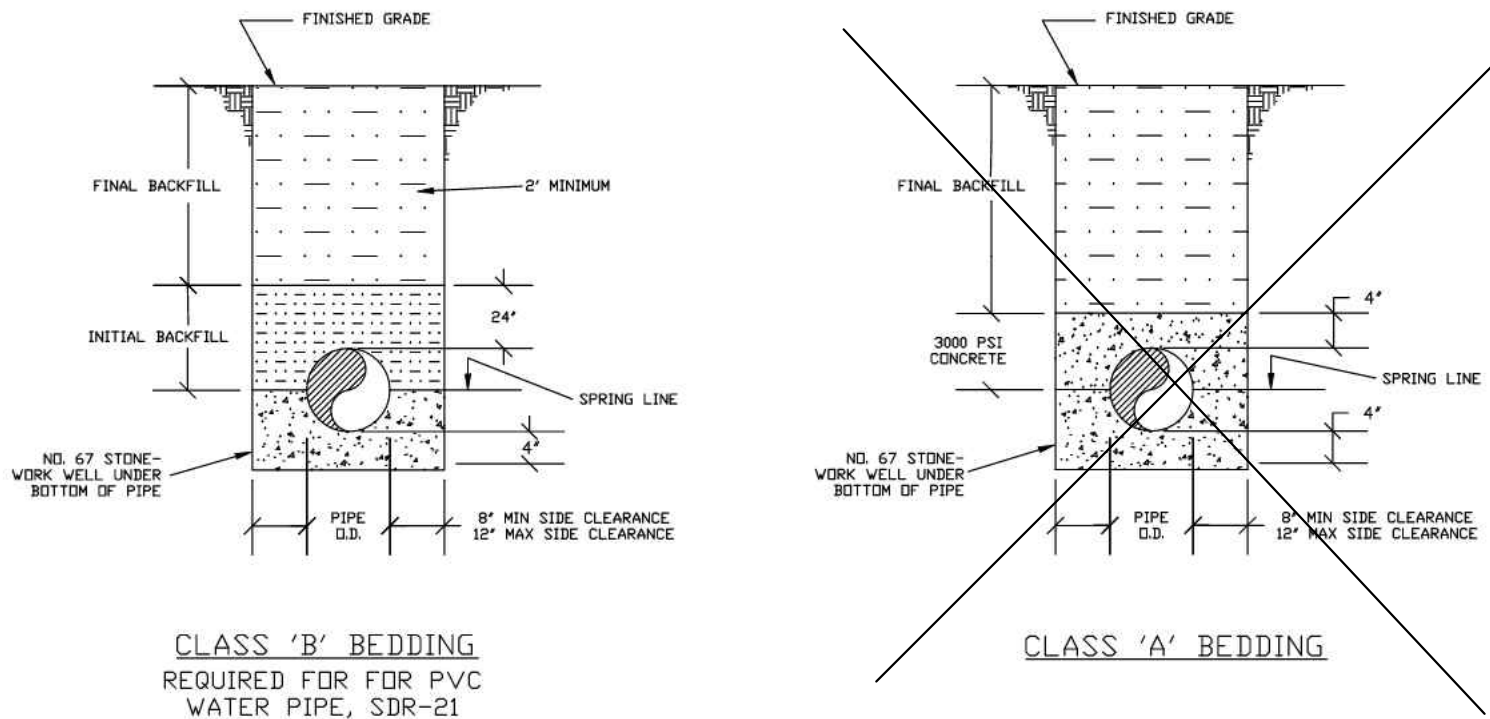
2 WATER LINE TRACE WIRE DETAIL
NOT TO SCALE



NOTES:

- BACKFILL TO 95% OF MAXIMUM DENSITY WHERE EXCAVATIONS CUT THROUGH PAVEMENTS, CURBS, DRIVEWAYS AND SIDEWALKS, AND UNDER OR ADJACENT TO STRUCTURES.
- STONE TO BE SIZE 1/2" TO 1-1/2", WELL TAMPED.
- STONE IS REQUIRED TO 6" BELOW PIPE WHERE WET CONDITIONS OR ROCK IS ENCOUNTERED, ONLY AS DIRECTED.
- HAND SHAPE TRENCH BOTTOM FOR LOWER QUADRANT OF PIPE AND BELLS.
- PROVIDE MINIMUM 3'-0" COVER OVER PIPE.

3 STANDARD WATER LINE TRENCH
NOT TO SCALE



CLASS 'B' BEDDING
REQUIRED FOR FOR PVC
WATER PIPE, SDR-21

CLASS 'A' BEDDING

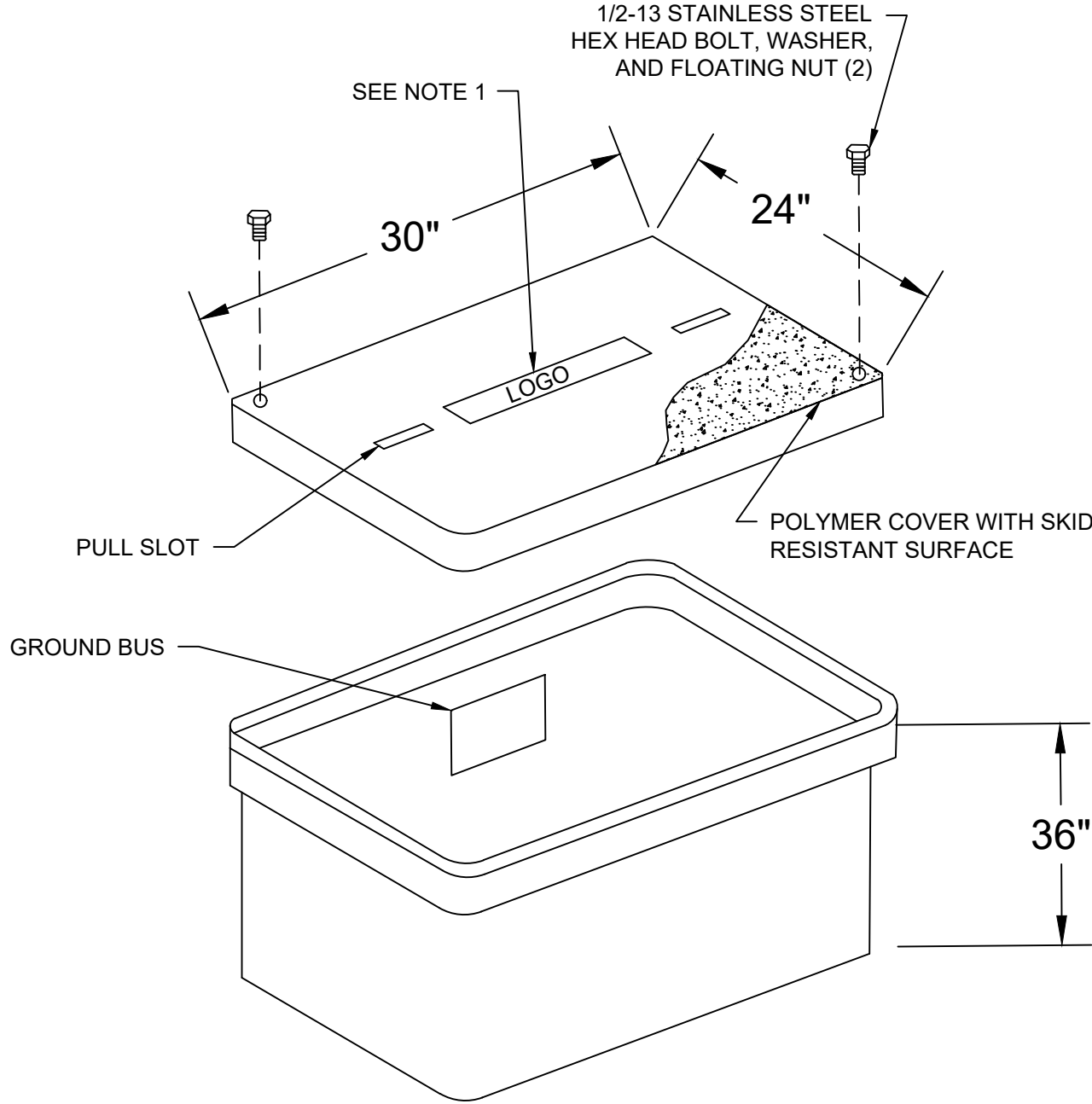
NOTES:

- NO ROCKS OR BOULDERS 4" OR LARGER TO BE USED IN BACKFILL.
- ALL BACKFILL MATERIAL SHALL BE SUITABLE NATIVE MATERIAL.
- BACKFILL SHALL BE TAMPED IN 6" LIFTS IN TRAFFIC AREAS AND 12" IN NON-TRAFFIC AREAS.
- MUST ACHIEVE 95% COMPACTION IN NON-TRAFFIC AREAS AND 95% COMPACTION IN TRAFFIC AREAS.
- #40 12 GAUGE (MIN) SOLID COPPER TRACER WIRE W/ THERMOPLASTIC INSULATION WIRE CONNECTORS TO BE 3M DBR, OR APPROVED EQUAL, AND SHALL BE WATER TIGHT TO PROVIDE ELECTRICAL CONTINUITY. WIRE SHALL BE PLACED BELOW PIPE IN BEDDING TO ENSURE THAT THE WIRE IS NOT DAMAGED DURING FUTURE REPAIRS.
- FOR TRENCHES REQUIRING SHORING & BRACING, DIMENSIONS SHALL BE TAKEN FROM THE INSIDE FACE OF THE SHORING & BRACING.
- TENCATE MIRAFIBR OR APPROVED SUBSTITUTE GEOTEXTILE MATTING MUST BE USED IF WASHED STONE COVERS PIPE.
- REFER TO STANDARD DETAILS 3.01 FOR PAVEMENT REPAIR

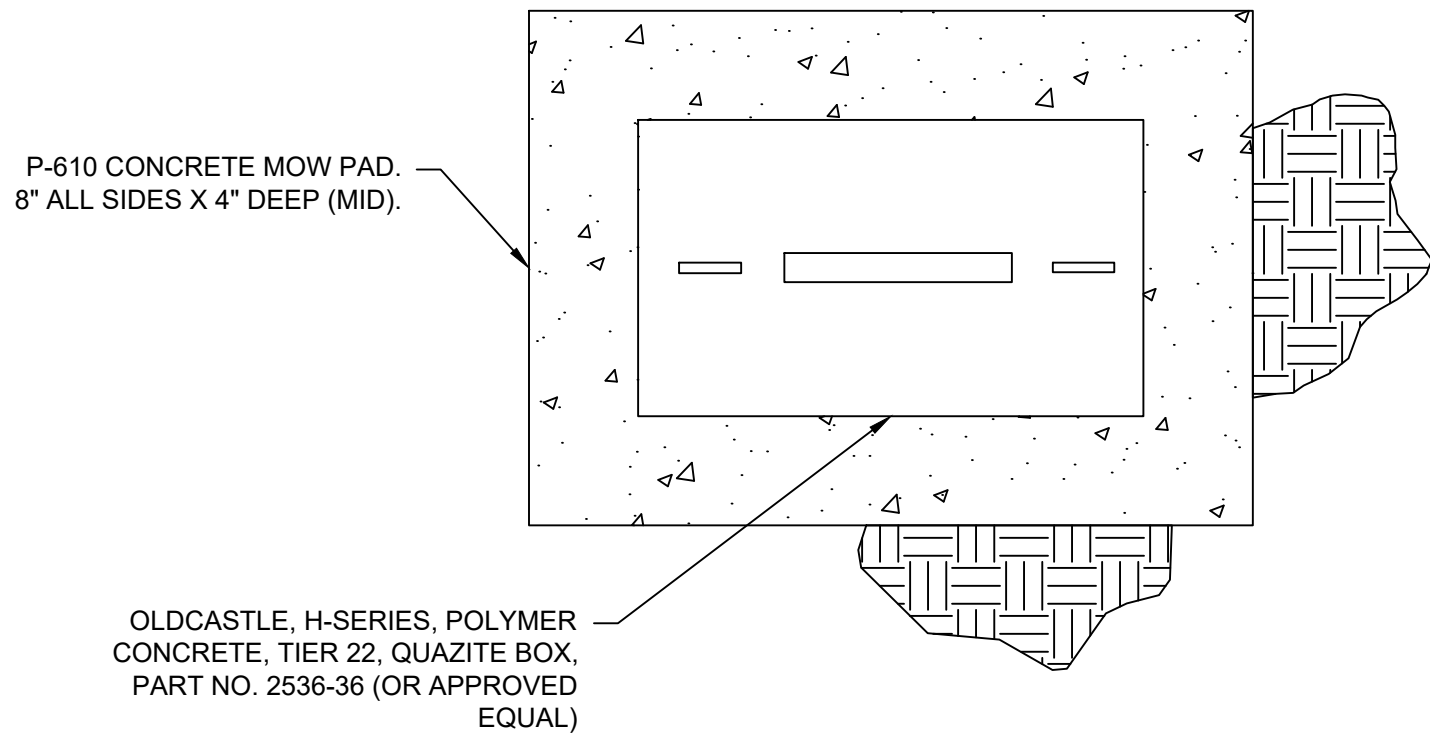
SHELBY STANDARD DETAILS - 2025	
DATE	REVISED

PIPE BEDDING AND BACKFILLING-
CLASS B&A

Shelby
6.01B



4 TRAFFIC RATED POLYMER CONCRETE DETAIL (24" x 36")
NOT TO SCALE



P-610 CONCRETE MOW PAD.
8" ALL SIDES X 4" DEEP (MID).

OLDCASTLE, H-SERIES, POLYMER
CONCRETE, TIER 22, QUAZITE BOX,
PART NO. 2536-36 (OR APPROVED
EQUAL)

NOTE:

- PROVIDE LIDS WITH THE LOGO AS "COMMUNICATION" FOR COMM. BOXES.
- TOP OF COVER SHALL BE 1" ABOVE FINISHED GRADE
- SEE DETAIL 5, THIS SHEET FOR PLAN VIEW

5 POLYMER CONCRETE BOX PLAN DETAIL (HAND HOLE)
NOT TO SCALE



PROFESSIONAL SEAL

REVISION RECORD	
NO.	DESCRIPTION
1	8/18/2026
2	ADDENDUM NO. 2
3	DATE
4	BY
5	MH
6	NO.

PROJECT NAME:	PROJECT FAST FOR SHELBY-CLEVELAND COUNTY REGIONAL AIRPORT (EHO) SHELBY, NORTH CAROLINA
DRAWING TITLE:	UTILITY DETAILS SHEET - 3

PROJ. MGR.:	GMK
DESIGN BY:	MH
DRAWN BY:	MH
PROJ. DATE:	AUGUST 2026
DRAWING NUMBER:	

30 OF 35
ARDURRA PROJ. NO.:
20231027.00.CL

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