

Appoquinimink School District

07/21/2020

TO: ALL OFFERORS
FROM: Keith Hopkins
Construction Projects Manager
SUBJECT: ADDENDUM # 4: ASD-BMECC

ADDENDUM # 4

All other terms and conditions remain the same.

ADDENDUM NO. 4

**APPOQUINIMINK SCHOOL DISTRICT
BRICK MILL EARLY CHILDHOOD CENTER
380 BRICK MILL ROAD
MIDDLETOWN, DE 19709**

**THE WHITING-TURNER CONTRACTING COMPANY
CONSTRUCTION MANAGER**
131 Continental Drive – Suite 404
Newark, DE 19713
302-292-0676

BIDS DUE: JULY 23, 2020 at 2:00 PM

LOCATION: *** CHANGE IN LOCATION *****
Marion E. Proffitt Training Center, Loading Dock
118 South Sixth Street
Odessa, DE 19730**

NOTICE TO ALL BIDDERS

1.0 GENERAL NOTES:

- 1.1 Bidders are hereby notified that this Addendum shall be and hereby becomes part of their Contract Documents, and shall be attached to the Project Manual for this project. All bidders shall acknowledge this addendum on the Bid Form.
- 1.2 The following items are intended to revise and clarify the Drawings and Project Manual, and shall be included by the Bidder in their proposal.
- 1.3 Bidders shall verify that their Sub-bidders are in full receipt of the information contained herein.
- 1.4 Deadline for questions shall be July 20, 2020.
- 1.5 Successful contractors shall provide the following contract items within seven (7) calendar days of receipt of contract. These items will be required for the Appoquinimink School District to issue a purchase order:
 - 1.5.1 Fully executed contract
 - 1.5.2 Insurance certificate
 - 1.5.3 Fully executed payment & performance bonds

2.0 CHANGES TO THE PROJECT MANUAL and DRAWINGS

- 2.1 Section 004000 31A Sitework Bid Form – Updated to include new alternate #10
 - 2.1.1 For contractor’s reference only

BRICK MILL EARLY CHILDHOOD CENTER APPOQUINIMINK SCHOOL DISTRICT - #2001

Addendum #4 - 7/21/2020

Attn: Steven Taylor
Cem-Base Inc.
8530 North Boyle Parkway
Twinsburg, Ohio 44087
Steve@cembase.com

- 2.2 See updated Sketch to include exterior mockup. The following trades are required to install mockup as detailed; concrete, framing, masonry, spray foam, window, metal panels, and roof coping.
- 2.3 See Architect's Narrative for Drawing Changes
- 2.4 See Architect's Narrative for Specification Changes

3.0 ATTACHMENTS

- 3.1.1 Architect's Narrative
- 3.1.2 Bid Question Log
- 3.1.3 Updated Sitework Bid Form
- 3.1.4 Updated Scopes of Work
- 3.1.5 Updated Schedule
- 3.1.6 Update Specifications
- 3.1.7 Updated Drawings

END OF ADDENDUM NO. 04

ADDENDUM NO. 4

Specifications and/or Drawings for
Brick Mill Early Childhood Center - #2001
Appoquinimink School District

Gilbert Architects
626 N. Charlotte St.
Lancaster, PA 17603
Studio Director:
Rod Frey, Jr.

July 21, 2020
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Revisions and modifications contained in this Addendum supersede the previously issued documents for the above referenced Project.

SPECIFICATION REVISIONS

- Item S2-1 TABLE OF CONTENTS
Division 32 – EXTERIOR IMPROVEMENTS
Add Section 321816.13 – PLAYGROUND PROTECTIVE SURFACING

- Item S2-2 SECTION 116800 – PLAYFIELD EQUIPMENT & STRUCTURES
Part 2 – Products, item C. Components List (Alternate Bid 1)
Revise heading to read: Components List (Base Bid)
Part 2 – Products, item D. Components List (Alternate Bid 2)
Revise heading to read: Components List (Alternate Bid 7A)
Part 2 – Products, item E. Components List (Alternate Bid 3)
Revise heading to read: Components List (Alternate Bid 7B)

- Item S2-3 SECTION 321816.13 – PLAYGROUND PROTETIVE SURFACING
Add section in its entirety

DRAWING REVISION

- Item D2-1 Drawing A5.1 – OVERALL EXTERIOR ELEVATIONS
Add Mock-Up Panel Elevation 6/A5.1. Refer to sketch SK-A-002.

- Item D2-2 Drawing A8.3 – WINDOW DETAILS
Window Detail 10/A8.3 – Revise note “CAST STONE SILL PROFILE TYPE “B”” to read
“PRECAST CONCRETE SILL PROFILE TYPE “B”.

- Item D2-3 Drawings A10.1 – FLOOR PATTERN PLAN – AREA – A and A10.2 – FLOOR PATTERN PLAN – AREA - B
Floor Pattern Plan Legend – Revise “CPT-1” to read **“CPT-2,”** Revise “CPT-2” to read **“CPT-3,”**
Revise “CPT-3” to read **“CPT-4,”** Revise “CPT-4” to read **“CPT-5,”** and Revise “CPT-5” to read
“CPT-6.”

- Item D2-4 Drawing E3.7, PARTIAL FIRST FLOOR SPECIAL SYSTEM PLAN – AREA ‘A’
 - a. CHANGE exterior camera at Multi-Purpose A136 and main lobby canopy to P3717-PLE. Refer to attached Sketch SK-E-01.
 - b. MOVE/CHANGE main lobby canopy camera to P3717-PLE. Refer to attached Sketch SK-E-01.

- Item D2-5 Drawing E3.8, PARTIAL FIRST FLOOR SPECIAL SYSTEM PLAN – AREA ‘B’
 - a. CHANGE exterior camera at Classroom B103 to P3717-PLE. Refer to attached Sketch SK-E-01.

- Item D2-6 Drawings EL-1, EL-2, EL-3, EL-4, EL-5, EL-6, CL-01, CC-02, CC-03, CC-07, CE-06, & CE-09 Issued

ADDENDUM NO. 4

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Brick Mill Early Childhood Center - #2001
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Gilbert Architects
626 N. Charlotte St.
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STRUCTURAL REVISIONS N/A

HVAC REVISIONS N/A

PLUMBING REVISIONS N/A

FIRE PROTECTION REVISIONS N/A

FOOD SERVICE REVISIONS N/A

END OF ADDENDUM

BRICK MILL EARLY CHILDHOOD CENTER - APPOQUINIMINK SCHOOL DISTRICT - #2001
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#	Division of Work	Drawing Set	Discipline	Document Reference	Date of Question	Question/Comment	Date of Response	Response
1	09	CD	Architectural	A3.4	06/02/20	There are multiple floor finishes listed in the schedule as SV-1. SV is not listed in the room finish schedule legend. Please advise what this product is	07/16/20	SV is the abbreviation for sheet vinyl.
2	07	CD	Architectural	Life Safety	06/02/20	Confirm no fire rated walls and no fire rated openings.	07/16/20	Confirmed. There are no fire rated walls and no fire rated openings.
3	04	CD	Architectural	A6.0	06/02/20	Details 1, 2, & 8 call for CMU partition head details. No CMU partitions are shown to be installed on this project. Please confirm and remove unnecessary details.	07/16/20	Confirmed. There are no CMU partitions on this project.
4	09	CD	Architectural	A6.0	06/02/20	Details 3, 4, 5, & 6 call for rated stud partition head of wall details. The life safety drawings indicate that there are no fire rated walls on this project. Please confirm and remove unnecessary details.	07/16/20	Confirmed. There are no fire rated stud partitions on this project.
5	09	CD	Architectural	A6.0	06/02/20	Detail 7 on A6.0 describes a non-rated or smoke resistant stud partition head detail. This particular detail, however, shows that fire safing material and sealant must be installed. There is also a note that states "Note: Seal all penetrations in wall -fluted steel deck/concrete floor or roof perpendicular or diagonal to flutes - similar to where parallel to flutes". If this wall type is not fire or smoke rated then why do we need to install fire safing and fire sealant material and why do we need to seal the flutes of the deck?	07/16/20	Refer to Life Safety drawings A1.3 and A1.4 for smoke partition locations.
6	09	CD	Architectural	A6.2	06/03/20	Note 12 from General Notes Building and Wall Sections (A6.2) reads: WHERE EXTERIOR WALLS MEET METAL DECK, SEAL ALL GAPS AT METAL DECK FLUTES, STRUCTURAL MEMBERS, OR ANY OTHER VOIDS WITH 2" MINIMUM SPRAYED INSULATION. Is this information detailed anywhere in the drawings? Should it be the same spray foam insulation as used on the exterior walls? Please provide more information and a detail if possible.	07/16/20	Provide insulation as indicated in the bid documents.
7	09	CD	Architectural	093013	06/04/20	Tile specification calls for waterproofing membrane. Should this membrane be installed under every tile floor? Should this membrane be installed behind wall tile? if so it is assumed at bathrooms not "wainscoting" wall protection.	07/16/20	Waterproofing membrane is not required. Will be clarified in an addendum.
8	07	CD	Architectural	A6.5	06/04/20	No below grade waterproofing or damproffing is shown to be installed on the foundation walls. Please confirm.	07/16/20	Confirmed. There is no waterproofing or damproffing being installed on the foundation walls.
9	10	CD	Architectural	A9.1	06/08/20	In room "A146 Files" there are five (5) Fire-resistant 4-Drawer Lateral Files shown. The majority of "loose" furniture has the tag N.I.C. but these lateral files do not. Is WT assumed to own these or are they by the owner? If by WT, please provide additional information/details.	07/16/20	These items are N.I.C. and will be purchased as a part of the FF&E package.
10	10	CD	Architectural	A9.5	06/08/20	General Note 5 states that the owner is responsible for furnishing AND installing paper towel and soap dispensers at ALL sink locations U.N.O. Are there any locations where the subcontractors must provide paper towel and/or soap dispensers that the owner is NOT providing? Note 6 states that the owner is responsible for furnishing AND installing toilet tissue dispensers at all toilets. To confirm, WT and the subcontractors are NOT responsible for furnishing or installing any toilet tissue, paper towel, and soap dispensers?	07/16/20	Confirmed.
11	10	CD	Architectural	A9.1	06/08/20	In room "A150 Principal" there are two (2) 2-Drawer Lateral Files with Bookshelf Above shown. The majority of "loose" furniture has the tag N.I.C. but these lateral files do not. Is WT assumed to own these or are they by the owner? If by WT, please provide additional information/details.	07/16/20	These items are N.I.C. and will be purchased as a part of the FF&E package.
12	33	CD	Civil	CE0.6	06/08/20	Under Construction Staging IV can step H be started after Step C ? Current phasing will require digging thru base course to install storm sewer.	07/16/20	yes. The Sequence of Construction has been revised to place utilities prior to the base course. The provided SOC is a general, as required by the delegated agency
13	33	CD	Civil	CE0.6	06/08/20	Under Construction Staging IV there is not any mention of cut/fill of building pad. Can this be done after completion of step D?	07/16/20	yes. The Sequence of Construction has been revised to prepare the building pad once E&S controls are placed and approved. The provided SOC is a general sequence as required by the delegated agency
14	22	CD	Architectural		06/09/20	Since this is an Early Childhood Center, should smaller toilets and lower mounting heights be used for little people?	07/16/20	Provide plumbing fixtures as indicated on the bid documents.
15	09	CD	Architectural	6/A6.2	06/09/20	Wall type D66 is not defined. Can you provide a detail?	07/16/20	Detail will be provided as part of an addendum.
16	08	CD	Architectural	A8.2 / 088725	06/09/20	Jamb detail at frames receiving ballistic film do not match spec 088725. Which detail is to be provided?	07/21/20	Void
17	31	CD	Civil	N/A	06/10/20	Who will be providing the CCR for the project?	07/16/20	Landmark will be providing the CCR
18	07	CD	Architectural		06/11/20	Please provide specification section for metal siding and metal flat-lock panels	07/16/20	Specifications will be provided as part of an addendum.
19	27	CD	Electrical	E4.2	06/12/20	Clarify if communication conduit extends into the existing building from the existing Hand Hole	07/21/20	Yes. There are spare conduits between existing building and manhole.
20	26	CD	Telecomm	260740	06/15/20	Please provide enlarged, less blurry figures 1-8 documents.	07/21/20	These are standard state issued specifications.
21	31	CD	Civil	CC-01	06/29/20	CC-01 9. Parking Calculations states that 18 bike racks are required (1 5-space rack and 13 single space racks). The locations for these bike racks are not indicated. Please provide bike rack locations.	07/16/20	a proposed bike pad/rack location is provided on the plans as required
22	22	CD	Civil	Civil Utility Docs	07/01/20	There is a new gas line shown entering the building. The civil drawings show this line coming out of the building and stopping at the 8" water line. What is the gas line routing? Where does this gas line tie into?	07/16/20	the Civil Drawings show the connection location to at the building, please reference the MEP Plans for proposed gas main routing
23	33	CD	Civil	CC-01	07/01/20	CC-01 Plan Index states that there is a Fire Marshal Record Type Plan (FM-01 to FM-02) and Lighting Plan (no drawing number given). These drawings do not currently exist in the civil document plans. Please provide.	07/16/20	a Fire Marshal plan and Lighting Plan are now provided. The Lighting plans provided are for agency review. see Furlow Plans for lighting specifications
24	05	CD	Structural	051200	07/02/20	Can the AISC Certification for Steel Erection be waived on this project?	07/16/20	Yes
25	32	CD	Architectural	116800	07/07/20	The playground protective surfacing is not specified or shown on the drawings. What type of playground protective surfacing is required?	07/21/20	Include a \$15,000 allowance in your base bid for protective surfaces. Amounts above or below this amount will be adjusted via change order.
26	32	CD	Architectural	A12.1	07/07/20	Playground alternate 7A and 7B: Should the contractor list the full cost of the alternate playground as shown on A12.1 on the bid form or should the alternate be listed as an add/deduct from the base bid?	07/16/20	The alternate should be shown as an add to the base bid. For example, if the alternate 7A design were to be accepted, your contract would be the your base bid plus the cost of alternate 7A.
27	32	CD	Architectural	A12.1	07/07/20	Could you provide a drawing scale for the playground drawings on A12.1?	07/16/20	Scale: 3/32" = 1'-0"
28	32	CD	Architectural	116800	07/07/20	Please let me know what color scheme you are looking for on this whether its more natural looking or primary colors.	07/16/20	Color will selected be owner from manufacturers full line of colors.
29	12	CD	Architectural	123216 & 123661	07/08/20	Both 123216 & 123661 refer to section 090600 Color Legend for color selections. This section is not part of the bid docs.	07/16/20	All schedules, including 090600 Color Legend, will be included as part of an addendum.
30	09	CD	Architectural	Affidavit of Craft Training	07/09/20	The state of Delaware does not offer a certified apprenticeship for the soft floor layers trade, how are we to fill out this form?	07/16/20	If a bidder's trade or category of work does not have a state recognized/certified apprenticeship program, bidder shall state as such on the Craft Training Compliance Affidavit in the space allotted for the contractor registration number. All bidders are still required to submit a completed Craft Training Compliance Affidavit with their bid.

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31	ALL	CD	N/A	N/A	07/09/20	Where are bids due?	07/16/20	Bids are due at the Marion E. Proffitt Training Center 118 S 6th St, Odessa, DE 19730 at the loading dock by 2:00PM on July 23, 2020.
32	31	CD	Civil	N/A	07/13/20	Is caulking of sidewalks required? The drawings don't indicate this.	07/16/20	Specifications will be provided as part of an addendum.
33	31	CD	Civil	N/A	07/13/20	Is there a detail of the fencing for the playground?	07/21/20	The detail for fencing is provided in updated CC-03
34	31	CD	Civil	N/A	07/13/20	Who is responsible for testing of soil compaction, steel, and concrete?	07/21/20	the owner
35	26	CD	Electrical		07/15/20	Please clarify that sand may be used in lieu of crushed stone or gravel referenced in electrical specification section Part 3, 3.10, B.	07/21/20	Sand is an acceptable alternative for electrical backfill.
36	26	CD	Electrical	SOW	07/15/20	In previous Appoquinimink School District projects there have been BIM requirements and an execution plan for MEP work. Will there be BIM for the MEP trades in this project? If so, can a BIM execution plan be provided?	07/20/20	No 3D modeling BIM coordination is required. See MEP Coordination narrative found in each MEP scope of work for more information
37	26	CD	Electrical	SOW	07/15/20	Electrical specific scope item #30 says to provide systems wiring to mechanical, fire and/or smoke dampers. Please confirm that this wiring will be provided and installed by others (i.e. Bid Pack 23, Bid Pack 27)	07/20/20	The electrical contractor shall own line voltage as required. The electrical contractor shall provide any raceways and conduit and boxes as required. Low voltage and/or systems wiring by others.
38	26	CD	Electrical	SOW	07/15/20	Please clarify that electrical specific scope item #32 refers to line voltage wire and terminations and that low voltage wire and terminations for BAS system are by others	07/20/20	Confirmed
39	26	CD	Electrical	SOW	07/15/20	Please clarify that EC is only responsible for power wiring in electrical specific scope item #34 and low voltage wiring and connections are by others.	07/20/20	Confirmed
40	26	CD	Electrical	SOW	07/15/20	Please confirm that Bid Pack 27A is responsible for General Sheet Note #1 on drawing E4.2.	07/20/20	See revised scopes of work for 26A and 27A. 27A contractor to provide telecom wiring and conduit in the existing Brick Mill Elementary School. Electrical contractor responsible for new underground ductbank and pull string. 27A contractor will be responsible for all telecom cabling.
41	26	CD	Electrical	SOW	07/15/20	Please confirm that Bid Pack 27A is responsible for all underground tele/data utilities, conduit, wire, hand holes for new incoming permanent telecommunication systems and all excavation and backfill for underground tele/data utilities per Tele/data specific scope items #7 and #8.	07/20/20	See revised scopes of work. Underground teledata conduit, handholes, excavation, back fill, etc. by the 26A subcontractor. Wire to be provided and installed by the 27A contractor.
42	26	CD	Electrical	SOW	07/15/20	Please confirm tele/data specific scope item #10 in its entirety is the responsibility of Bid Pack 27A contractor.	07/20/20	Item #10 is entirely in 27A scope with exception of raceway/conduit/cable tray and boxes.
43	26	CD	Electrical	SOW	07/15/20	Please confirm that all wiring, devices and terminations for special systems, BAS, tele/data and VoIP are provided and installed by others.	07/20/20	Confirmed, raceways and back boxes and pull strings by electrical contractor.
44	26	CD	Electrical	N/A	07/15/20	On previous Appoquinimink School District projects, the Town of Middletown provided and installed the medium voltage transformer, cabling and terminations. Will they be providing and installing these for this project? If so, can a timeline be provided so temporary power installation can coincide with the installation of the primary service? Also, can a footprint of the proposed medium voltage transformer be provided?	07/20/20	Town of Middletown to provide transformer. Electrical contractor to provide all ductbank, cabling, primary and secondary, and pad as shown on E4.2. Assume pad size as shown. Temp power & lighting milestone to be October 16, permanent power milestone will be December 23.
45	26	CD	Electrical	N/A	07/15/20	Please provide location of monument sign and required feeder size.	07/21/20	Signage location and requirements have yet to be determined.
46	31	CD	Civil	Bid Form	07/15/20	Can lines for all 7 unit prices requested from the site contractor be added to the bid form?		Bid Form will be updated
47	21	CD	Fire Protection	FP5.1	07/16/20	Please confirm where the fire protection contractor will begin their work; 5 out or starting at the capped floor floor flange. The project scope in addendum 2 contradicts the notes on the FP bid drawings.		See updated scopes of work. Plumber shall provide incoming service into building to match fire water service detail on FP5.1
48	32	CD	Architectural	A12.1	07/16/20	It appears that plastic curbing is to be used as a containment system for the base bid and alternate 7A. Is this correct? Should the same containment system be utilized for Alternate 7B as well?	07/21/20	Yes
49	09	CD	Architectural	SOW	07/16/20	Please verify that resinous flooring is not in 09C Flooring		Confirmed.
50	09	CD	Architectural	A10.1	07/16/20	Floor pattern plan legend on A10.1 shows a legend for carpet 1-5. please verify it should be carpets 2-6.	07/20/20	Verified it should be carpets 2-6.
51	09	CD	Architectural	SOW	07/16/20	Flooring Scope of Work Narrative #19 Expansion Joints and Control Joints, Shouldn't they be installed when the concrete is poured?	07/21/20	Expansion and control joints per flooring manufacturers recommendations.
52	31	CD	Civil		07/16/20	Is the depth known of the existing gravel to be removed and stored?	07/21/20	The depth is not known. Based on the single test boring, 1t 12" mixed with silt. It can be stored as required with LOD.
53	05	CD	Structural		07/16/20	Are column thru-plates required for the moment connections even if they are not required to develop the moment values provided?	07/21/20	Include column thru plates for moment connections. Engineer to verify on shop drawings.
54	05	CD	Structural		07/16/20	Are CJP welds required for the beam to column moment connections even if they are not required to develop the moment values provided?	07/21/20	Include CJP welds at beam to column moment connections. Engineer to verify on shop drawings.
55	22	CD	Plumbing		07/17/20	Can Pro-press fitting be used for domestic water?	07/21/20	Pro-press is not acceptable by the school district.
56	27	CD	Security		07/16/20	Room A128-MDF should the smoke detector be switched to a combination smoke/heat to monitor room temperature?	07/20/20	No
57	27	CD	Security		07/16/20	Should there be a M3058-PLVE inside the door of the MDF to monitor and confirm activity?	07/20/20	No
58	27	CD	Security		07/16/20	Audio Enhancement sound is not shown in the classrooms, should it be included?	07/20/20	Intercom speakers which are part of the Audio Enhancements systems are shown. We will need the MS-500 amplifiers in all classrooms. For paging, please make the Multi-Purpose Room a zone with the remainder of the building (offices and common areas) to be a second zone.
59	27	CD	Security		07/16/20	Should there be an Axis 8105-E video door bell at a door location at the rear of the building?	07/20/20	Not at this time
60	27	CD	Security		07/16/20	Would you like to change the Axis Q3518LVE to a P3717 mounted under the canopy for greater field of view?	07/20/20	Yes
61	27	CD	Security		07/16/20	Should there be a camera in the kitchen to view activity at the door and the storage room?	07/20/20	No
62	27	CD	Security		07/16/20	Section 280725 Intrusion System - Section 1.3 calls out Bosch 9512GV2 control panel; the rest of this spec calls out for DSC control panel and devices - Section 2.1.A.11 calls for a printer for the intrusion system? We have not provided this in past bids	07/20/20	Use the latest version of the Bosch panel with IP communications. Printer not required.
63	27	CD	Security		07/16/20	Section 280728 CCTV Network Digital Video Management System - Please confirm that the DVMS is provided by the School District - JCI shall provide the Axis camera models as shown on the drawings dated 06/23/2020	07/20/20	Yes, ASD will provide the server. With the exception shown above, JCI to use the models shown for pricing. Per specs, specific camera models to be selected by ASD prior to purchasing.
64	05	CD	Structural		07/16/20	Do all the roof drains need steel frames?	07/21/20	Provide what is indicated on the documents.
65	31	CD	Civil		07/17/20	Can a detail be provided for the water meter pit that is called out on our scope of work. Can it please include the pre-piping size/sizes?	07/21/20	No water meter is proposed on the civil drawings for the proposed development, the existing water meter on site is an existing meter, no information is available.
66	21	CD	Fire Protection	SOW	07/17/20	Is coordination to be through BIM?	07/20/20	No 3D modeling BIM coordination is required. See MEP Coordination narrative found in each MEP scope of work for more information
67	21	CD	Fire Protection		07/17/20	Sprinkler piping method for the front canopy is an issue in many ways with it being a dry-pipe system [trapped pipe that will be a maintenance nightmare even though there is a drain valve, cutting the beam and joists & installation].	07/21/20	This will need to be further reviewed during the shop drawing submission

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68	21	CD	Fire Protection	SOW	07/17/20	Can the plumber bring the fire protection main into the building from a point 5' outside of the building? The domestic line a right next to it and we will just have him do it anyway. FP5.1 fire water service has the 5' by the plumber.	07/20/20	See updated scopes of work. Plumber shall provide incoming service into building to match fire water service detail on FP5.1
69	21	CD	Fire Protection	SOW	07/17/20	FP Scope has two lines #4 & #15] that have fire hose valves/cabinets and there are not any on the project. List as in #8 in 210170-8	07/21/20	No hose valves cabinets required.
70	21	CD	Fire Protection		07/17/20	Is the FDC to be flush chrome plated or polished brass? FP5.1 has is as polished brass but the spec has is as chrome.	07/21/20	FDC to be polished brass
71	21	CD	Fire Protection		07/17/20	Addendum 2 has two shifts. Is that necessary if we can do it without that or with additional manpower?	07/20/20	Provide 2 shifts with the base bid as indicated in the bid form. Overtime shall be evaluated on a weekly basis.
72	14	CD	N/A		07/17/20	Who is the obligee/owner?	07/20/20	Appoquinimink School District
73	14	CD	N/A		07/17/20	Are there liquidated damages?	07/20/20	No
74	14	CD	N/A		07/17/20	What is the retention %?	07/20/20	5%
75	14	CD	N/A		07/17/20	Where do I find the OMB Form?	07/20/20	Front end section 004300
76	23	CD	Mechanical		07/17/20	Is there going to be a 3rd party commissioning agent on this project?	07/20/20	No, but there will be some coordination with the owner's facilities team
77	23	CD	Mechanical		07/18/20	We normally have to submit a consent of surety document with our bids for the district. I can't find one in the documents and it is not listed on the bid form as a necessary attachment. Would you please confirm that none is required or tell me where to find it?	07/21/20	Consent of Surety is not required. The bid bond is NOT waived.
78	31	CD	Civil		07/18/20	Can the following be added to the plans or quantities of each be made available? Bollards, Bike Racks, Truncated Domes.	07/21/20	No bollards are called out on civil plans. The truncated domes are per the number of proposed access ramps. The number of bike racks is provided in the plans (see addendum #3 update).
79	10	CD	Architectural		07/17/20	The Electronic site sign, is in which scope we did not see it in our 10A scope nor are we able to price at this time, we have assumed it is owner furnished owner installed can you confirm package	07/20/20	Yes, this will be in 10A's scope. Due to the late notice of this add, include a \$25,000 allowance for material/subcontractor cost. Prime bidder's labor and profit to be included in the base bid. Any amount above or below this amount to be adjusted via change order.
80	10	CD	Architectural		07/17/20	Acoustical wall panels in the multi-purpose room are not in 10A scope, please confirm	07/20/20	The acoustic panels are in the 09D scope. The wall panels/pads are in the 10A scope.
81	10	CD	Architectural		07/17/20	Site Trash Receptacles in 10A scope, I don't see a specification section or locations on the drawings, can you provide, thanks.	07/20/20	None required. Remove from scope of work.
82	10	CD	Architectural		07/17/20	Please confirm locations and specifications for the residential appliances in 10A scope	07/20/20	Refrigerator and vending machine are by owner. Remove from scope of work
83	09	CD	Architectural	SOW	07/20/20	Line item #36 in the 09A scope of work says to F/I access doors and panels. Typically access doors are furnished by the door contractor and the panels are furnished by the MEP contractors. We have no way of knowing what or how many they will need. Please advise	07/20/20	Assume furnish and install (10) 16"x16" no rated access panels by the 09A contractor.
84	31	CD	Civil		07/20/20	We have seen a couple of references to fencing in both W-T S.O.W. and E&S sequence of construction. We cannot locate fencing on the civil drawings or W-T logistics plan other than the various types of silt fence, but we do see a GATE drawn on the logistics plan. Is there some sort of fencing that is to be installed? If so, can you provide what type, height, and footage of installation?	07/21/20	The orange safety fence noted on the Civil drawings is now noted as Sensitive Area Protection fencing (SAP), per DNREC specifications. Updated plan and detail is provided (CE-09). Fencing and gates as shown on the Logistics plan is by WT.
85	07	CD	Architectural	SOW	07/20/20	The metal panel scope of work item #8 indicates that this scope of work is to furnish and install coping. While the roofing scope item #23 notes the roofing scope to furnish and install wall/ parapet coping. Is the intent for the metal panel contractor to pick up the coping above the metal wall panels and the roofing contractor to pick up the coping everywhere else? Please clarify.	07/20/20	The roofing contractor shall be responsible for parapet coping
86	07	CD	Architectural	SOW	07/20/20	Is the roofing contractor scheduled to furnish and install all of the through wall flashings at both metal wall panels and masonry associated with the roof installation? Does this also include the installation of the continuous term bar and sealant at the top of through wall flashing as well?	07/20/20	The roofing contractor shall provide flashing integral to the roofing system. The masonry contractor will provide flashing integral to the masonry. Include term bar and sealant for applicable locations.
87	07	CD	Architectural	075323	07/20/20	Section 075323 Membrane Roofing Item 3.10 Protecting & Cleaning It is not feasible to protect the entire roof from every single contractor, especially a project of this size. We would recommend that the trades working on the roof provide their own roof protection. Or can an allowance be provided to carry in our bid for roof protection.	07/20/20	Protection of roofing shall be the responsibility of each trade working on the finished roof.
88	07	CD	Architectural	Roof Plan	07/20/20	The architectural & plumbing roof plan show what appears to be an overflow drain in front of each primary roof drain however the penetration is not labeled. Please confirm this penetration.	07/21/20	See F-18 fixture on P6.1. This is a combination primary and secondary drain. Overflow discharge is through the exterior wall as shown on A5.3.
89	31	CD	Civil	SOW	07/20/20	Sitework scope item 13 calls for coordination with the mechanical contractor for a grease trap. None is shown on the civil drawings. Is there a grease trap?	07/20/20	Plumber/mechanical contractor is responsible for the grease interceptor. This is inside the building and shown on the plumbing drawings.
90	31	CD	Civil	SOW	07/20/20	Sitework scope item 14 call to include a water meter pit to Artesian standards. None is shown on the civil drawings. Is there a meter pit?	07/20/20	Water meter pit not required. Remove from scope of work.
91	31	CD	Civil	SOW	07/20/20	Sitework scope item 40 call for all fencing as shown. Is there a detail for the gate shown in the fence plan view?	07/20/20	The detail for fencing is provided in updated CC-03. The fencing/gates shown on the WT logistics plan is construction fencing by WT.
92	31	CD	Civil	SOW	07/20/20	Item 48 requires a stone road from the SCE to the stone parking lot. What distance are we to use for the roadway?	07/20/20	Approx. 245 lf.

BRICK MILL EARLY CHILDHOOD CENTER - APPOQUINIMINK SCHOOL DISTRICT - #2001
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SECTION 004000 – BID FORM

For Bids Due: July 23, 2020 **To:** Appoquinimink School District
118 South Sixth Street
Odessa, DE 19730

Bid Package: ASD-BMECC-31A-Sitework

Name of Bidder: _____

Delaware Business License No.: _____ **Taxpayer ID No.:** _____

(Other License Nos.): _____

Phone No.: _____

The undersigned, representing that he has read and understands the Bidding Documents and that this bid is made in accordance therewith, that he has visited the site and has familiarized himself with the local conditions under which the Work is to be performed, and that his bid is based upon the materials, systems and equipment described in the Bidding Documents without exception, hereby proposes and agrees to provide all labor, materials, plant, equipment, supplies, transport and other facilities required to execute the work described by the aforesaid documents for the lump sum itemized below:

BASE BID: \$ _____ **Dollars**

(\$ _____) (in numbers)

Amount included in the base bid above for overtime to meet the project schedule included in the project specifications: \$ _____

Bidder acknowledges that the amount listed for overtime work is included in the base bid for the project.

ALTERNATES – See Specific Scope of Work for complete descriptions of alternate pricing :

Refer to the specifications and specific scope of work for alternates. Not all of the blank spaces may be required. Alternate prices are to conform to applicable project specification sections or drawing details. An “ADD” or “DEDUCT” amount is indicated by the crossed out part that does not apply. If alternate does not apply to a specific bid package, insert: “Not Applicable”

ALTERNATE NO. 1: Add four (4) classrooms to the south end of the Base Bid building as indicated on plans and specifications. Provide modified the casework and instructional boards in Classrooms B103, B105, B108 and B110 as indicated on plans.

Add / Deduct: _____ **Dollars**
(\$ _____) (in numbers)

Amount included in the alternate above for overtime to meet the project schedule included in the project specifications: \$ _____

Bidder acknowledges that the amount listed for overtime work is included in the alternate for the project.

BRICK MILL EARLY CHILDHOOD CENTER - APPOQUINIMINK SCHOOL DISTRICT - #2001
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ALTERNATE NO. 2: Add two (2) classrooms to the north end of the Base Bid building as indicated on plans and specifications

Add / Deduct: _____ Dollars
(\$ _____) (in numbers)

Amount included in the alternate above for overtime to meet the project schedule included in the project specifications: \$ _____

Bidder acknowledges that the amount listed for overtime work is included in the alternate for the project.

ALTERNATE NO. 3: Add two (2) classrooms to the south end of the Alternate Bid 1 as indicated on plans and specifications

Add / Deduct: _____ Dollars
(\$ _____) (in numbers)

Amount included in the alternate above for overtime to meet the project schedule included in the project specifications: \$ _____

Bidder acknowledges that the amount listed for overtime work is included in the alternate for the project.

ALTERNATE NO. 4: Furnish and install HIAS (Acrovyn) wall protection in Vestibules A101, A113, and B106, Lobby A102, and Corridors A114, A115, A124, A135, A142, and B107 as indicated on plans and specifications

Add / Deduct: _____ Dollars
(\$ _____) (in numbers)

ALTERNATE NO. 4A: Furnish and install HIAS (Acrovyn) wall protection in Vest. B116 and Corridor B117 (ref. Alternate Bid No. 1)

Add / Deduct: _____ Dollars
(\$ _____) (in numbers)

ALTERNATE NO. 4B: Furnish and install HIAS (Acrovyn) wall protection in Vest. A154 and A156, and Corridor A155 (ref. Alternate Bid No. 2)

Add / Deduct: _____ Dollars
(\$ _____) (in numbers)

ALTERNATE NO. 4C: Furnish and install HIAS (Acrovyn) wall protection in Vest. B121 and B123, and Corridor B122 (ref. Alternate Bid No. 3)

Add / Deduct: _____ Dollars
(\$ _____) (in numbers)

ALTERNATE NO. 5: Furnish and install ceramic tile wainscot in Vestibules A101, A113, and B106, Lobby A102, and Corridors A114, A115, A124, A135, A142, and B107 as indicated on plans and specifications

Add / Deduct: _____ Dollars
(\$ _____) (in numbers)

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ALTERNATE NO. 5A: Furnish and install ceramic tile wainscot in Vest. B116 and Corridor B117 (ref. Alternate Bid No. 1)

Add / Deduct: _____ Dollars
(\$ _____) (in numbers)

ALTERNATE NO. 5B: Furnish and install ceramic tile wainscot in Vest. A154 and A156, and Corridor B155 (ref. Alternate Bid No. 2)

Add / Deduct: _____ Dollars
(\$ _____) (in numbers)

ALTERNATE NO. 5C: Furnish and install ceramic tile wainscot in Vest. B121 and B123, and Corridor B122 (ref. Alternate Bid No. 3)

Add / Deduct: _____ Dollars
(\$ _____) (in numbers)

ALTERNATE NO. 6: Construct and fit-out Toilet room A141, accessible from playground as indicated on plans.

Add / Deduct: _____ Dollars
(\$ _____) (in numbers)

ALTERNATE NO. 7A: Furnish and install playground alternate A. Refer to A12.1

Add / Deduct: _____ Dollars
(\$ _____) (in numbers)

ALTERNATE NO. 7B: Furnish and install playground alternate B. Refer to A12.1

Add / Deduct: _____ Dollars
(\$ _____) (in numbers)

ALTERNATE NO. 8: Furnish and install motorized shades at window types W4 and W5 in Multi-Purpose Room A136, including associated power tie-in by electrical contract.

Add / Deduct: _____ Dollars
(\$ _____) (in numbers)

ALTERNATE NO. 9: Furnish and install FRP doors in aluminum entrance frames at door, EXA102, EXA103, EXA104, EXA105, EXA106, EXA107, EXA109, EXA110, EXAB101

Add / Deduct: _____ Dollars
(\$ _____) (in numbers)

ALTERNATE NO. 9A: Furnish and install FRP doors in aluminum entrance frames at door EXB102 (ref. Alternate Bid No. 1)

Add / Deduct: _____ Dollars
(\$ _____) (in numbers)

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ALTERNATE NO. 9B: Furnish and install FRP doors in aluminum entrance frames at door EXA111 and EXA112 s (ref. Alternate Bid No. 2)

Add / Deduct: _____ Dollars
 (\$ _____) (in numbers)

ALTERNATE NO. 9C: Furnish and install FRP doors in aluminum entrance frames at doors EXB103 and EXB104. (ref. Alternate Bid No. 3)

Add / Deduct: _____ Dollars
 (\$ _____) (in numbers)

ALTERNATE NO. 9D: Furnish and install FRP door in aluminum entrance frame at door EXA108 (ref. Alternate Bid No. 6)

Add / Deduct: _____ Dollars
 (\$ _____) (in numbers)

ALTERNATE NO. 10: Furnish and install cement stabilized subgrade. See CC-02.

Add / Deduct: _____ Dollars
 (\$ _____) (in numbers)

UNIT PRICES – See specific Scope of Work for unit pricing description:

Unit prices conform to applicable project specification section. Refer to the specifications and/or specific scope of work for a complete description of required unit prices for this bid package.

	ADD	DEDUCT
UNIT PRICE No. 1 _____	\$ _____	\$ _____
UNIT PRICE No. 2 _____	\$ _____	\$ _____
<i>UNIT PRICE No. 3</i> _____	\$ _____	\$ _____
<i>UNIT PRICE No. 4</i> _____	\$ _____	\$ _____
<i>UNIT PRICE No. 5</i> _____	\$ _____	\$ _____
<i>UNIT PRICE No. 6</i> _____	\$ _____	\$ _____
<i>UNIT PRICE No. 7</i> _____	\$ _____	\$ _____

I/We acknowledge the receipt of addenda as listed below and the price(s) submitted include any cost/schedule impact they may have.

Addendum Number	Date of Addendum
_____	_____
_____	_____

BRICK MILL EARLY CHILDHOOD CENTER - APPOQUINIMINK SCHOOL DISTRICT - #2001
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This bid shall remain valid and cannot be withdrawn for **Sixty (60)** days from the date of opening of bids, and the undersigned shall abide by the Bid Security forfeiture provisions. Bid Security is attached to this Bid (REQUIRED).

The Owner shall have the right to reject any or all bids, and to waive any informality or irregularity in any bid received.

This bid is based upon work being accomplished by the Sub-Contractors named on the list attached to this bid.

Should I/We be awarded this contract, I/We pledge to complete all the work required in accordance with the project schedule include in specification section 013210.

The undersigned represents and warrants that he has complied and shall comply with all requirements of local, state, and national laws; that no legal requirement has been or shall be violated in making or accepting this bid, in awarding the contract to him or in the prosecution of the work required; that the bid is legal and firm; that he has not, directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken action in restraint of free competitive bidding.

Upon receipt of written notice of the acceptance of this Bid, the Bidder shall, within twenty (20) calendar days, execute the agreement in the required form and deliver the Contract Bonds, and Insurance Certificates, required by the Contract Documents.

I am / We are an Individual / a Partnership / a Corporation

By _____ Trading as _____
(Individual's / General Partner's / Corporate Name)

(State of Corporation)

Business Address: _____

Witness: _____

By: _____
(Authorized Signature)

(Printed Name and Title)

Date: _____

ATTACHMENTS

- Sub-Contractor List (See Section 00435 and any updates by addenda)
- Non-Collusion Statement

BRICK MILL EARLY CHILDHOOD CENTER - APPOQUINIMINK SCHOOL DISTRICT - #2001
Addendum #4 - 7/21/2020

Affidavit of Employee Drug Testing
Affidavit of Contractor Qualifications
Bid Security (Deposit or Bid Bond)
Affidavit of Craft Training Compliance

BID FORM

Bid Package #: ASD-BMECC-31A-Sitework

SUBCONTRACTOR LIST

In accordance with Title 29, Chapter 6962 (d)(10)b Delaware Code, the following sub-contractor listing must accompany the bid submittal. The name and address of the sub-contractor must be listed for each category where the bidder intends to use a sub-contractor to perform that category of work. In order to provide full disclosure and acceptance of the bid by the *Owner*, it is required that bidders list themselves as being the sub-contractor for all categories where he/she is qualified and intends to perform such work.

NOTE: Subcontractor categories specific to each bid package are listed in specification section 00435 and will be updated at the pre-bid meeting and via addendum. If no categories are requested for a bid package, then none are required to be submitted. Refer to specification section 00435 and any addenda that may modify the required listing.

<u>Subcontractor Category</u>	<u>Subcontractor</u>	<u>Address (City & State) & License #</u>
<u>Sitework</u>	_____	City _____ State _____ License _____ # _____

BID FORM

NON-COLLUSION STATEMENT

This is to certify that the undersigned bidder has neither directly nor indirectly, entered into any agreement, participated in any collusion or otherwise taken any action in restraint of free competitive bidding in connection with this proposal submitted this date to the Appoquinimink School District.

All the terms and conditions of Bid ASD-BMECC have been thoroughly examined and are understood.

NAME OF BIDDER:

**AUTHORIZED REPRESENTATIVE
(TYPED):**

**AUTHORIZED REPRESENTATIVE
(SIGNATURE):**

TITLE:

ADDRESS OF BIDDER:

PHONE NUMBER:

Sworn to and Subscribed before me this _____ day of _____ 2020.

My Commission expires _____. NOTARY PUBLIC _____

THIS PAGE MUST BE SIGNED AND NOTARIZED FOR YOUR BID TO BE CONSIDERED.

**AFFIDAVIT
OF
EMPLOYEE DRUG TESTING PROGRAM**

4104 Regulations for the Drug Testing of Contractor and Subcontractor Employees Working on Large Public Works Projects requires that Contractors and Subcontractors implement a program of mandatory drug testing for Employees who work on Large Public Works Contracts funded all or in part with public funds.

We hereby certify that we have in place or will implement during the entire term of the contract a Mandatory Drug Testing Program for our employees on the jobsite, including subcontractors that complies with this regulation:

Contractor/Subcontractor Name: _____

Contractor/Subcontractor Address: _____

Authorized Representative (typed or printed): _____

Authorized Representative (signature): _____

Title: _____

Sworn to and Subscribed before me this _____ day of _____ 2020.

My Commission expires _____. NOTARY PUBLIC _____.

THIS PAGE MUST BE SIGNED AND NOTARIZED FOR YOUR BID TO BE CONSIDERED.

BRICK MILL EARLY CHILDHOOD CENTER - APPOQUINIMINK SCHOOL DISTRICT - #2001

Addendum #4 - 7/21/2020

BRICK MILL EARLY CHILDHOOD CENTER
380 BRICK MILL ROAD MIDDLETOWN, DE 19709
ASD-BMECC

**AFFIDAVIT
OF
CONTRACTOR QUALIFICATIONS**

We hereby certify that we will abide by the contractor's qualifications outlined in the construction bid specifications for the duration of the contract term.

In accordance with Title 29, Chapter 69, Section 6962(d)(10)b.3 of the Delaware Code, after a contract has been awarded the successful bidder shall not substitute another subcontractor whose name was submitted on the Subcontractor Form except for the reasons in the statute and not without written consent from the awarding agency. Failure to utilize the subcontractors on the list will subject the successful bidder to penalties as outlined in the General Requirements Section 5.2 of the contract.

Contractor Name: _____

Contractor Address: _____

Authorized Representative (typed or printed): _____

Authorized Representative (signature): _____

Title: _____

Sworn to and Subscribed before me this _____ day of _____ 20____.

My Commission expires _____. NOTARY PUBLIC _____.

THIS PAGE MUST BE SIGNED AND NOTARIZED FOR YOUR BID TO BE CONSIDERED.

BRICK MILL EARLY CHILDHOOD CENTER - APPOQUINIMINK SCHOOL DISTRICT - #2001
Addendum #4 - 7/21/2020

BRICK MILL EARLY CHILDHOOD CENTER
380 BRICK MILL ROAD MIDDLETOWN, DE 19709
ASD-BMECC

**AFFIDAVIT OF
CRAFT TRAINING COMPLIANCE**

We, the contractor, hereby certify that we and all applicable subcontractors will abide by the contractor and subcontractor craft training requirements outlined below for the duration of the contract. Craft training is defined as “an apprenticeship program approved by and registered with any State apprenticeship agency or the United States Department of Labor.”¹ A list of crafts for which there are approved and registered training programs is maintained by the Delaware Department of Labor and can be found at <https://det.delawareworks.com/apprenticeship/>. Information pertaining to subcontractor craft training programs shall be provided by the contractor prior to contract execution. If you have questions regarding craft training programs, please submit them in writing to the Delaware Department of Labor at: apprenticeship@delaware.gov.

In accordance with Title 29, Chapter 69, Section 6962(d)(13) of the Delaware Code, contractors and subcontractors must provide craft training for journeyman and apprentice levels if **all** of the following apply:

- A. A project meets the prevailing wage requirement under Title 29, Chapter 69, Section 6960 of the Delaware Code.
- B. The contractor employs 10 or more total employees.
- C. The project is not a federal highway project

Failure to provide required craft training on the project may subject the successful contractor and/or subcontractor(s) to penalties as outlined in Title 29, Chapter 69, Section 6962(d)(13) of the Delaware Code.

Craft(s) _____

Contractor Name: _____

Contractor Address: _____

**Contractor/Subcontractor Program
Registration Number** _____
On this line also indicate whether DE, Other State (identify) or US Registration Number

Authorized Representative (typed or printed): _____

Authorized Representative (signature): _____

Title: _____

Sworn to and Subscribed before me this _____ day of _____, 20____.

My Commission expires _____. NOTARY PUBLIC _____.

THIS PAGE MUST BE SIGNED AND NOTARIZED FOR YOUR BID TO BE CONSIDERED.

Title 29, Chapter 69, Section 6902(7) of the Delaware Code.
END OF SECTION 004000

SHIFT WORK NARRATIVE:

1. *This contractor shall include the following requirements for shift work:*
 - a. *Shift 1: 7:00am – 3:30pm*
 - b. *Shift 2: 3:00pm – 11:30pm*
2. *Contractors working (2) shifts shall provide equal crew sizes, with foreman for each shift. Crew sizes will be mutually agreed upon prior to award.*
3. *Contractors shall work (2) shifts for the entire duration of the stipulated activities*
4. *Contractors shall indicate the value of overtime labor on the bid form in the locations provided for both the base bid and applicable alternates. This value will be tracked by WT during the project.*
5. *Multiple shift requirements shall only be “lifted” at the discretion of WT.*

NARRATIVE:

1. Include the cost of performance and payment bonds in the base bid.
2. This contractor is responsible for all fall protection and safety requirements associated with roof work. When working from lifts & harnesses, or tie-offs provided by this contractor, OSHA standards must be met and followed at all times.
3. Daily Cleanup of debris. If this contractor does not clean the site to the satisfaction of Whiting Turner, Whiting Turner reserves the right to clean the site with their own forces at the expense of this contractor. Site must be maintained and cleaned daily.
4. All trucks are required to clean their tires prior to leaving the project site.
5. A temporary power source will be provided, but it will be the responsibility of this contractor to have a backup power source in case the temporary service goes out. Temporary power will consist of 110V service. If a larger service is required to perform any work in the scope described herein, it will be the responsibility of this contractor.
6. Furnish and install mock-up(s) as required by the specifications. Mock-up will not only be used to approve material but to establish the quality for the entire project. Any area not conforming to the mock-up will be reworked. In addition, the architect will inspect the first sections of completed work to develop a standard for the rest of the work. An exterior wall mock-up will be needed, review specifications for all mock-ups required.
7. Furnish attic stock as required per the specifications.
8. This contractor shall furnish and install all sealants integral to the work associated with this bid package.
9. Wiring diagrams for all electrical devices provided and/or installed by this contractor are to be provided and coordinated with the Electrical/Security Contractor in time for electrical rough-in.
10. All in wall blocking will be by the drywall contractor, 09A. The 10A Specialties Contractor is responsible to coordinate all in wall blocking required for the scope of work in this bid package with the 09A drywall contractor, during stud framing and prior to drywall install. If this contractor fails to coordinate blocking requirements with the 09A contractor than it shall be this contractor’s responsibility to remove installed material to install missed blocking. It shall be this contractor’s responsibility to replace any finished material that had to be removed.
11. Furnish and install all toilet and bath accessories, including by not limited to the electrical hand dryers, grab bars, mirrors, sanitary napkin disposal bins, soap and towel dispensers, shelves, and mop/broom hooks, mop/broom holders, under lavatory guards, etc. Coordinate with the Electrical Contractor for the installation of electric hand dryers. Coordinate with all applicable ADA guidelines.
12. Paper towel, toilet tissue, and soap dispensers will be furnished and installed by the owner. The 10A contractor will be responsible for any paper towel, toilet tissue, and soap dispensers specifically shown to be installed by the 10A contractor.
13. Furnish all necessary mounting hardware for a complete installation of toilet and bath accessories.

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14. Furnish and install all toilet compartments, hardware and installation accessories. This contractor is responsible to coordinate layout and installation of materials to meet all handicapped code requirements for size, layout and accessory locations. Coordinate blocking requirements with 09A contractor.
15. Furnish and install all corner guards and wall covering as indicated. Include wood top rail at wall covering.
16. This contractor shall furnish and install all visual display boards, including marker boards, tack boards, tack panels, tack panel backsplash, and visual display rails. Include all required mounting materials, inwall blocking by others.
17. Furnish and install all interior and exterior signage complete including the interior and exterior letters, building plaque, site sign, and construction sign. All mounting devices, fittings, adhesives and any other materials required to properly install all signage is to be provided by the contractor. This includes any surface mounted blocking. This contractor is responsible to coordinate all in-wall blocking for signage during wall framing. All in-wall blocking will be provided by the Drywall Contractor 09A.
18. This contractor shall furnish and install the building lettering system complete, including blocking, angles, mounting post, and letters to provide a complete installation. This contractor is responsible for field verification of all dimensions at all sign locations. This contractor is responsible for all shop drawings, product data and engineering as required for fabrication and installation of all sign components. Provide samples of each different sign type to be installed in the building as defined in the specifications. At a minimum, supports must be installed prior to metal panel/roofing activities so they can be properly flashed in.
19. Furnish and install all cubicle curtains, curtain carriers, and tracks as specified. Coordinate with the 09A contractor for blocking. Coordinate with the MEP trades to make sure the tracks are coordinated with lights, sprinkler heads, diffusers/registers, devices, etc.
20. This contractor shall furnish and install all operable partition systems complete, including but not limited to partition panels, tracks, hardware, sound seals, sweeps, special finishes, etc.
21. Steel framing for operable partitions as detailed on the contract drawings is by others. However, this contractor is responsible to coordinate layout of the operable partition with the steel contractor. Any additional support steel required for a complete operable partition system, not shown on the contract drawings is the responsibility of this contractor.
22. This contractor shall furnish and install all plaques as required by the documents and specifications including but not limited to all hardware, accessories, layout, shop drawings, samples, etc. All in wall blocking for plaques is provided by the Drywall Contractor; however, it is the responsibility of this contractor to coordinate locations for blocking during wall framing.
23. Furnish and install all fire extinguisher cabinets both (recessed and surface mounted), fire extinguishers and accessories. Recessed cabinets are to be coordinated with the drywall contractor as necessary. Include all required fire extinguisher signage and stickers. Follow all ADA and IBC mounting guidelines.
24. Furnish and install all automatic external defibrillator cabinets (recessed, semi-recessed and/or surface mounted), automatic external defibrillators, and accessories. Recessed cabinets are to be coordinated with the drywall contractor as necessary. Included all required signage and stickers. Follow all ADA and IBC mounting guidelines.
25. Furnish and install all metal lockers as indicated, including but not limited to metal lockers, hardware, accessories, identification labels, hooks, locks, filler strips, etc. Blocking and/or strapping required for the installation of lockers is by others, however this contractor is responsible for coordination of all blocking/strapping with the Drywall Contractor prior to wall close up.
26. Furnish and install all flagpoles as required by the Contract Documents. Flags are to be included as specified in the contract documents. Concrete flagpole bases will be installed by others,

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however, any required anchor bolts, sleeves, shims, sealant, mastic, and layout are to be furnished by this contractor for the foundations/bases.

27. ~~*This contractor shall furnish and install all trash receptacles per the contract documents. Concrete bases will be installed by others, but this contractor is required to provide any inserts, anchor bolts, embedded connections, etc. as necessary for proper installation to the Sitework Contractor.*~~
28. ~~*This contractor shall furnish and install all residential appliances as per the contract documents.*~~
29. This contractor shall be responsible for protection of ALL finishes provided by this contractor from time of installation until punchlist. Refreshing of protection shall be the responsibility of this contractor.
30. Furnish and install wall padding as indicated. Include all surface mounted blocking/clips, trim and edging required for a complete installation. Provide cutouts in mats for switches, devices, etc. as required – coordinate with MEP trades. Coordinate any blocking requirements with the 09A contractor.
31. Furnish and install Knox Box as required.
32. Furnish and install all aluminum column covers. Include shims, anchors, splices, clips, closure rings, trims, sealants, etc. required for a complete installation. Coordinate with steel and stud contractors for locations, layout, and specific requirements. Protect column covers until substantial completion. Coordinate with the framing contractor, steel contractor, and metal panel contractor.
33. Furnish and install two (2) 4’x8’ exterior grade plywood signs. Signs shall be mounted on 4’x4’ pressure treated posts installed in the ground. Final locations to be coordinate with WT.
34. Furnish and install HIAS (Acrovyn) wall protection per the alternate requirements. Include all fasteners, adhesives, accessories, etc. as required for a complete installation.
35. *Furnish and install exterior electronic site sign. Include all necessary accessories and mounting components. Coordinate installation with concrete, masonry, and electrical contractors. Contractor to include a \$25,000 allowance in the base bid for this work.*

ALLOWANCES

Include the following allowances in the base bid. They will be billed against on a time and material basis during the project with labor rates and unit prices that will include the allowable overhead and profit. Any unused portion will be credited from the contract. The allowances can be used for another purpose at the discretion of the CM at any time:

1. None.

ALTERNATES

Insert the following alternate prices into the spaces provided on the bid form.

ALTERNATE NO. 1: Add four (4) classrooms to the south end of the Base Bid building as indicated on plans and specifications. Provide modified the casework and instructional boards in Classrooms B103, B105, B108 and B110 as indicated on plans.

ALTERNATE NO. 2: Add two (2) classrooms to the north end of the Base Bid building as indicated on plans and specifications.

ALTERNATE NO. 3: Add two (2) classrooms to the south end of the Alternate Bid 1 as indicated on plans and specifications.

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ALTERNATE NO. 4: Furnish and install HIAS (Acrovyn) wall protection in Vestibules A101, A113, and B106, Lobby A102, and Corridors A114, A115, A124, A135, A142, and B107 as indicated on plans and specifications

ALTERNATE NO. 4A: Furnish and install HIAS (Acrovyn) wall protection in Vest. B116 and Corridor B117 (ref. Alternate Bid No. 1).

ALTERNATE NO. 4B: Furnish and install HIAS (Acrovyn) wall protection in Vest. A154 and A156, and Corridor A155 (ref. Alternate Bid No. 2).

ALTERNATE NO. 4C: Furnish and install HIAS (Acrovyn) wall protection in Vest. B121 and B123, and Corridor B122 (ref. Alternate Bid No. 3).

ALTERNATE NO. 5: Furnish and install ceramic tile wainscot in Vestibules A101, A113, and B106, Lobby A102, and Corridors A114, A115, A124, A135, A142, and B107 as indicated on plans and specifications.

ALTERNATE NO. 5A: Furnish and install ceramic tile wainscot in Vest. B116 and Corridor B117 (ref. Alternate Bid No. 1).

ALTERNATE NO. 5B: Furnish and install ceramic tile wainscot in Vest. A154 and A156, and Corridor B155 (ref. Alternate Bid No. 2).

ALTERNATE NO. 5C: Furnish and install ceramic tile wainscot in Vest. B121 and B123, and Corridor B122 (ref. Alternate Bid No. 3).

ALTERNATE NO. 6: Construct and fit-out Toilet room A141, accessible from playground as indicated on plans.

ALTERNATE NO. 7A: Furnish and install playground alternate A. Refer to A12.1

ALTERNATE NO. 7B: Furnish and install playground alternate B. Refer to A12.1

ALTERNATE NO. 8: Furnish and install motorized shades at window types W4 and W5 in Multi-Purpose Room A136, including associated power tie-in by electrical contract.

ALTERNATE NO. 9: Furnish and install FRP doors in aluminum entrance frames at door, EXA102, EXA103, EXA104, EXA105, EXA106, EXA107, EXA109, EXA110, EXAB101.

ALTERNATE NO. 9A: Furnish and install FRP doors in aluminum entrance frames at door EXB102 (ref. Alternate Bid No. 1).

ALTERNATE NO. 9B: Furnish and install FRP doors in aluminum entrance frames at door EXA111 and EXA112 s (ref. Alternate Bid No. 2).

ALTERNATE NO. 9C: Furnish and install FRP doors in aluminum entrance frames at doors EXB103 and EXB104. (ref. Alternate Bid No. 3).

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ALTERNATE NO. 9D: Furnish and install FRP door in aluminum entrance frame at door EXA108 (ref. Alternate Bid No. 6)

UNIT PRICES

None.

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SECTION 011200-21A – SPECIFIC SCOPE OF WORK – FIRE PROTECTION

SPECIFIC SCOPE – FIRE PROTECTION:

- A. The provisions outlined in the General Scope of Work shall apply to all items of this section. All work shall be in accordance with the schedule.
- B. This work shall include all labor, supervision, material, tools, equipment, shop drawings, submittals, layout, unloading, scaffolding, ladders, hoisting, transportation, taxes, permits, engineering, support functions, insurance, bonds, and any other items or services necessary for and reasonably incidental to the proper execution and completion of the work, whether temporary or permanent, in accordance with all drawings, specifications, addenda, general conditions, requirements, and other related documents as indicated herein. All work shall be furnished and installed unless noted otherwise herein. The scope of work shall include but not be limited to the following specific scope of work:

SPECIFICATION SECTIONS

Prepared by Gilbert Architects, dated June 23, 2020:

Volume 1: Divisions 00 – 01

Volume 2: Divisions 02 – 14

Volume 3: Divisions 21 – 33

The contractor is fully responsible for the technical specification sections as listed below for this Unit of Work. The exception to this is when the note “As Applicable” follows a technical specification section. In that case, other units of work, as defined by the Scope, may also have some responsibility for that particular section. General Conditions, Supplementary Conditions, General Requirements and General Scope Items apply to each and all of the Individual Units of Work.

Section	Description	Responsibility
Division 00	Bidding and Contract Requirements	In Its Entirety
Division 01	General Requirements	In Its Entirety
Division 03	Concrete	As Applicable
Division 04	Masonry	As Applicable
Division 05	Metals	As Applicable
Division 06	Wood, Plastics, and Composites	As Applicable
Division 07	Thermal and Moisture Protection	As Applicable
Division 08	Openings	As Applicable
Division 09	Finishes	As Applicable
Division 10	Specialties	As Applicable
Division 11	Equipment	As Applicable
Division 12	Furnishings	As Applicable
Division 21	Fire Suppression	In Its Entirety
Division 22	Plumbing	As Applicable
Division 23	HVAC	As Applicable
Division 26	Electrical	As Applicable
Division 28	Electronic Safety and Security	As Applicable
Division 31	Earthwork	As Applicable
Division 32	Exterior Improvements	As Applicable
Division 33	Utilities	As Applicable

SHIFT WORK NARRATIVE:

1. *This contractor shall include the following requirements for shift work:*
 - a. *Shift 1: 7:00am – 3:30pm*
 - b. *Shift 2: 3:00pm – 11:30pm*
2. *Contractors working (2) shifts shall provide equal crew sizes, with foreman for each shift. Crew sizes will be mutually agreed upon prior to award.*
3. *Contractors shall work (2) shifts for the entire duration of the stipulated activities*
4. *Contractors shall indicate the value of overtime labor on the bid form in the locations provided for both the base bid and applicable alternates. This value will be tracked by WT during the project.*
5. *Multiple shift requirements shall only be “lifted” at the discretion of WT.*

NARRATIVE:

1. Include the cost of performance and payment bonds in the base bid.
2. Review all drawings including civil, structural, architectural, mechanical, electrical, plumbing, fire protection and food service prior to mobilization to identify all items that need to be embedded, penetrate or generally coordinated with sprinkler work.
3. Provide all permits and fees required. New Castle County building permit provided by Whiting-Turner.
4. Provide all fire suppression piping, hangers, valves, backflow preventer, dry system valve assemblies, air compressors, sprinkler heads, fittings, fire hose cabinets, hose connection valves, identification devices, drains, labels, tags, alarm devices, flow switches, tamper switches, fire department connection, signage, etc. for a complete automatic fire protection system.
5. Provide wet and dry systems as required to meet all local codes and inspection agency requirements.
6. ~~*Provide incoming fire water service from a point 5’ outside the building. Provide all excavation and backfill required to perform this work. Provide sleeve in foundation wall as required for incoming fire water service. Incoming fire service by the plumber. Follow detail in FP5.1 for connection.*~~
7. Provide fire-stopping sealant at all penetrations in fire-rated walls, floors and ceilings.
8. Provide access doors as required.
9. Perform hydraulic testing of all systems prior to fire marshal inspection.
10. Verify all required clearances for all equipment.
11. Provide all cutting, patching, core drilling, sleeves and penetrations as required. Sleeve all penetrations at all walls and floorings. Provide sleeves to the appropriate contractors as required.
12. Provide chrome escutcheons at all exposed pipe penetrations.
13. Provide proper sprinkler head types for any high heat locations.
14. Provide proper sprinkler head types where required for freeze protections.
15. Provide fire hose valves and cabinets as shown.
16. Provide guards or screen on sprinkler heads as shown.
17. Provide concrete splash blocks at test drain locations.
18. Provide all fall protection and safety measures required to complete this work.
19. Provide scaffolding, rigging, hoisting, security and storage for this work.
20. Furnish and install any penetration through exterior wall or roof deck prior to spray foam and roofing contractors starting their work. If this contractor installs a penetration after this work is complete it will be this contractor’s responsibility to properly patch and seal the penetration(s).
21. Coordinate all power and fire alarm wiring requirements with electrical contractor and special systems contractor.

22. **MEP COORDINATION:**

Each MEP Contractor shall be responsible to take part in the MEP coordination process. This coordination process will be done using two dimensional drawings. The Mechanical Contractor shall be responsible to take the lead in this process, overlay all other MEP trade coordination drawings and create a totally coordinated set of MEP shop drawings that the MEP systems can be installed to. In

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addition as-built modifications shall also be the responsibility of the Mechanical Contractor at the completion of the project. Once all as-built modifications are made the Mechanical Contractor shall provide drawings in both hard copy and electronic format as part of the O&M documentation.

The process will be as follows: Before any coordination drawings are started a coordination meeting will be held. All MEP contractors will be required to attend. At the initial meeting the items to be discussed will be as follows.

- #1 – Electronic software to be used
- #2 – Scale to be used
- #3 – Assignments of layers to each MEP Contractor
- #4 – Sequence of design based on construction sequence through the building

After the initial meeting all MEP Contractors will be given a copy of the project backgrounds. It will be the Mechanical Contractors responsibility to make sure these backgrounds are imported onto the coordination drawings. In addition steel shop drawings will also be distributed for use in the coordination process. Each MEP Contractor will create their coordination drawings based on the layer or elevation given to them in the initial coordination meeting. If any part of their work extends out of the designated layer they are to notify both the Construction Manager and the Mechanical Contractor of this potential interference. Once notified the Mechanical Contractor will research if the potential interference impacts other systems and will present possible solutions at bi weekly coordination meeting. At the bi weekly coordination meetings these potential interferences and solutions will be discussed and the least cost solution will be utilized. All MEP Contractors are responsible to attend these bi weekly meetings and send at least 3 days in advanced updated files of their coordination drawings to the Mechanical Contractor so the coordination drawings at the meeting are current. These meeting will continue until the coordination process is complete. If an MEP Contractor does not see fit to attend these meetings or if electronic updates of their coordination drawings are not sent to the mechanical contractor in a timely fashion a \$500.00 penalty may be assessed and a credit change order issued to their contract. Please note that the coordination process is part of building the project. No additional compensation will be due for relocation of any MEP systems as part of this coordination process.

ALLOWANCES

Include the following allowances in the base bid. They will be billed against on a time and material basis during the project with labor rates and unit prices that will include the allowable overhead and profit. Any unused portion will be credited from the contract. The allowances can be used for another purpose at the discretion of the CM at any time:

None.

ALTERNATES

Insert the following alternate prices into the spaces provided on the bid form.

ALTERNATE NO. 1: Add four (4) classrooms to the south end of the Base Bid building as indicated on plans and specifications. Provide modified the casework and instructional boards in Classrooms B103, B105, B108 and B110 as indicated on plans.

ALTERNATE NO. 2: Add two (2) classrooms to the north end of the Base Bid building as indicated on plans and specifications.

ALTERNATE NO. 3: Add two (2) classrooms to the south end of the Alternate Bid 1 as indicated on plans and specifications.

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ALTERNATE NO. 4: Furnish and install HIAS (Acrovyn) wall protection in Vestibules A101, A113, and B106, Lobby A102, and Corridors A114, A115, A124, A135, A142, and B107 as indicated on plans and specifications

ALTERNATE NO. 4A: Furnish and install HIAS (Acrovyn) wall protection in Vest. B116 and Corridor B117 (ref. Alternate Bid No. 1).

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ALTERNATE NO. 4C: Furnish and install HIAS (Acrovyn) wall protection in Vest. B121 and B123, and Corridor B122 (ref. Alternate Bid No. 3).

ALTERNATE NO. 5: Furnish and install ceramic tile wainscot in Vestibules A101, A113, and B106, Lobby A102, and Corridors A114, A115, A124, A135, A142, and B107 as indicated on plans and specifications.

ALTERNATE NO. 5A: Furnish and install ceramic tile wainscot in Vest. B116 and Corridor B117 (ref. Alternate Bid No. 1).

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ALTERNATE NO. 6: Construct and fit-out Toilet room A141, accessible from playground as indicated on plans.

ALTERNATE NO. 7A: Furnish and install playground alternate A. Refer to A12.1

ALTERNATE NO. 7B: Furnish and install playground alternate B. Refer to A12.1

ALTERNATE NO. 8: Furnish and install motorized shades at window types W4 and W5 in Multi-Purpose Room A136, including associated power tie-in by electrical contract.

ALTERNATE NO. 9: Furnish and install FRP doors in aluminum entrance frames at door, EXA102, EXA103, EXA104, EXA105, EXA106, EXA107, EXA109, EXA110, EXAB101.

ALTERNATE NO. 9A: Furnish and install FRP doors in aluminum entrance frames at door EXB102 (ref. Alternate Bid No. 1).

ALTERNATE NO. 9B: Furnish and install FRP doors in aluminum entrance frames at door EXA111 and EXA112 s (ref. Alternate Bid No. 2).

ALTERNATE NO. 9C: Furnish and install FRP doors in aluminum entrance frames at doors EXB103 and EXB104. (ref. Alternate Bid No. 3).

ALTERNATE NO. 9D: Furnish and install FRP door in aluminum entrance frame at door EXA108 (ref. Alternate Bid No. 6)

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UNIT PRICES

None.

OVERTIME NARRATIVE (FOR UNDERGROUND PLUMBING ACTIVITIES):

1. *This contractor shall include the following requirements for overtime:*
 - a. *(4) 10 hour days, Monday – Thursday*
 - b. *(1) 8 hour day, Friday*
 - c. *(1) 8 hour day, Saturday*
 - d. *Contractors may choose to work additional hours each day as weather permits. Each contractor must still work 6 days per week until the specific activity is complete.*
2. *Contractors shall use the overall durations of their activities to determine the number of weeks the extended hours are required.*
3. *Contractors shall work the hours above with their normal crew size, at a minimum. Crew sizes will be mutually agreed upon prior to award.*
4. *Contractors shall indicate the value of overtime labor on the bid form in the locations provided for both the base bid and applicable alternates. This value will be tracked by WT during the project.*
5. *Contractors shall also note where multiple crews and/or increased manpower will be required when activities are shown as overlapping.*
6. *Extended hours requirements shall only be “lifted” at the discretion of WT.*

SHIFT WORK NARRATIVE (FOR OVERHEAD ROUGH-IN, IN-WALL ROUGH-IN, MECHANICAL SYSTEM DEVICES & FIXTURES, PLUMBING SYSTEM DEVICES & FIXTURES):

7. *This contractor shall include the following requirements for shift work:*
 - a. *Shift 1: 7:00am – 3:30pm*
 - b. *Shift 2: 3:00pm – 11:30pm*
8. *Contractors working (2) shifts shall provide equal crew sizes, with foreman for each shift. Crew sizes will be mutually agreed upon prior to award.*
9. *Contractors shall work (2) shifts for the entire duration of the stipulated activities*
10. *Contractors shall indicate the value of overtime labor on the bid form in the locations provided for both the base bid and applicable alternates. This value will be tracked by WT during the project.*
11. *Multiple shift requirements shall only be “lifted” at the discretion of WT.*

NARRATIVE:

1. Include the cost of performance and payment bonds in the base bid.
2. Provide all fall protection and safety measures required to complete this work.
3. Provide all mock-ups as required by specifications. Mock-ups will be used to approve materials and establish level of quality for the work.
4. Review all drawings including civil, structural, architectural, mechanical, electrical, plumbing, fire protection and food service prior to mobilization to identify all items that need to be embedded, penetrate or generally coordinated with mechanical work.
5. Provide all warranties for material, equipment and labor as specified.
6. Provide fire-stopping sealant for all penetrations at wall, floors and ceilings.
7. Field superintendent required on-site at all times contractor’s forces or subcontractor’s forces are working.
8. Provide access panels as required for concealed valves or devices. Access panel locations to be coordinated with construction manager.
9. Provide all louvers and vents. Refer to mechanical and architectural drawings for all louver locations. Provide blank-off plates at unused sections of louvers.
10. Provide all cleanout and escutcheon plates as required.
11. Provide final utility connections to all food service equipment. Provide all plumbing and HVAC connections including domestic water, gas, sanitary drainage, vent, exhaust duct, condensate, traps,

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- valves, insulation. Include setting and grouting of floor troughs and drain troughs after concrete pour. Troughs and drain troughs will be furnished by kitchen contractor.
12. Provide final assembly of plumbing and HVAC related utility connections.
 13. Furnish and install all equipment indicated in the mechanical schedule including electric cabinet heaters, electric unit heaters, and electric panel radiation.
 14. Provide all permits and fees required. New Castle County building permit provided by Whiting-Turner.
 15. Perform hydraulic tests for all systems. All tests to be witnessed by Whiting-Turner. Provide all testing documentation to Whiting-Turner.
 16. Verify all required clearances for all equipment.
 17. MEP COORDINATION:

Each MEP Contractor shall be responsible to take part in the MEP coordination process. This coordination process will be done using two dimensional drawings. The Mechanical Contractor shall be responsible to take the lead in this process, overlay all other MEP trade coordination drawings and create a totally coordinated set of MEP shop drawings that the MEP systems can be installed to. In addition as-built modifications shall also be the responsibility of the Mechanical Contractor at the completion of the project. Once all as-built modifications are made the Mechanical Contractor shall provide drawings in both hard copy and electronic format as part of the O&M documentation.

The process will be as follows: Before any coordination drawings are started a coordination meeting will be held. All MEP contractors will be required to attend. At the initial meeting the items to be discussed will be as follows.

- #1 – Electronic software to be used
- #2 – Scale to be used
- #3 – Assignments of layers to each MEP Contractor
- #4 – Sequence of design based on construction sequence through the building

- After the initial meeting all MEP Contractors will be given a copy of the project backgrounds. It will be the Mechanical Contractors responsibility to make sure these backgrounds are imported onto the coordination drawings. In addition steel shop drawings will also be distributed for use in the coordination process. Each MEP Contractor will create their coordination drawings based on the layer or elevation given to them in the initial coordination meeting. If any part of their work extends out of the designated layer they are to notify both the Construction Manager and the Mechanical Contractor of this potential interference. Once notified the Mechanical Contractor will research if the potential interference impacts other systems and will present possible solutions at bi weekly coordination meeting. At the bi weekly coordination meetings these potential interferences and solutions will be discussed and the least cost solution will be utilized. All MEP Contractors are responsible to attend these bi weekly meetings and send at least 3 days in advanced updated files of their coordination drawings to the Mechanical Contractor so the coordination drawings at the meeting are current. These meetings will continue until the coordination process is complete. If an MEP Contractor does not see fit to attend these meetings or if electronic updates of their coordination drawings are not sent to the mechanical contractor in a timely fashion a \$500.00 penalty may be assessed and a credit change order issued to their contract. Please note that the coordination process is part of building the project. No additional compensation will be due for relocation of any MEP systems as part of this coordination process.
18. Provide all vibration isolation devices and thrust restraints for all equipment as specified.
 19. Provide all cutting, patching, core drilling, sleeves and penetrations as required. Sleeve all penetrations at all walls and floorings. Provide sleeves to the appropriate contractors as required.

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20. Provide and set sleeves in foundation walls for all utilities. Provide all below slab plumbing piping to a point 5' outside exterior walls. All final utility (water and sewer) connections by this contractor regardless of the sequence of the utility installation.
21. Provide grease interceptor and associated piping.
22. Provide all hydronic piping and duct insulation per contract documents.
23. Perform flushing, testing and sterilizing of domestic water systems.
24. Provide complete plumbing system to include all domestic water piping, gas piping, valves, backwater valves, storm water piping, roof drains, floor drains, kitchen floor drains, vent piping, plumbing fixtures, plumbing equipment, hose bibs, yard hydrants, roof hydrants, cleanouts, pipe anchors, hot water heaters, expansion tanks, circulator pumps, condensate pumps, mixing valves, gas regulators, eye wash stations, etc.
25. Coordinate installation of roof drains with roofer. This may required furnish roof drain components to roofer for installation if necessary for compatibility with roofing system.
26. Coordinate gas piping installation with local utility company. Provide all gas piping downstream of gas meter. Provide all supports and accessories for gas piping and system. Provide all gas regulators, relief valves and vents.
27. Provide all vents and drains at high and low points in piping.
28. Furnish, install, maintain and remove temporary water service during construction. Provide a temporary hose bib and utility sink in the custodial closet. Connect temporary water service to main service utility piping. Provide temporary roof drain piping until permanent connections to storm system are made.
29. Provide all necessary items for complete HVAC system. Provide piping, equipment, sheet metal ductwork, double-wall duct, fans, grilles, registers, diffusers, valves, labels, tags, sealants, insulation, cleanouts, dampers, access doors and panels.
30. Controlled dampers provided by ATC contractor and installed by this contractor.
31. Ductwork to be coordinated with steel joists to allow for ductwork to be run through the webbing of the bar joists
32. Provide layout to other trades for all ductwork and piping passing through walls and floors.
33. Provide access doors in ductwork as required.
34. Provide temporary heating and cooling during construction. New equipment shall be used to condition the building as needed to allow finish trades to complete their work. New equipment needs to be installed and operational as soon as practical. Change all filters as needed while new equipment is used during construction.
35. Furnish and install all pipe and duct insulation required per the contract documents. Include shields and saddles at hanger and vapor barriers as required.
36. Furnish and install any penetration through exterior wall or roof deck prior to spray foam and roofing contractors starting their work. If this contractor installs a penetration after this work is complete it will be this contractor's responsibility to properly patch and seal the penetration(s).
37. All warranties for equipment that is used prior to final completion for construction heating or cooling shall be extended to provide owner with full term of specified warrant from date of final completion.
38. All equipment used prior to final completion shall be serviced, inspected and cleaned prior to final completion and acceptance by owner.
39. Provide new filters in all equipment prior to final testing and balancing.
40. Provide all grilles and diffusers in walls and ceilings. Coordinate rough opening sizes with appropriate contractors.
41. All ductwork to be delivered to project clean with ends sealed. Upon completion of ductwork installation each day, open ends of duct to be sealed. If ductwork is found to be dirty, duct shall be cleaned by contractor.
42. Provide start-up, testing and commissioning of all new equipment and systems as specified.
43. Perform pre-construction review of ductwork shop drawings with Testing & Balancing contractor and mechanical engineer to review locations of balancing dampers.

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44. Perform all duct leakage testing per specifications. Submit testing procedures to construction manager.
45. Coordinate with electrical contractor to provide shutdown of necessary HVAC equipment upon activation of duct-mounted smoke detectors. Provide control wiring as required. Confirm proper operation with electrical contractor.
46. Provide all concrete housekeeping pad locations and layout for mechanical and plumbing equipment. Forming and pouring concrete by the 03A Concrete Contractor.
47. Provide emergency gas solenoid valves as shown.
48. Provide all motor starters, disconnects, VFDs scheduled to be supplied with new equipment.
49. Verify electrical requirements for new mechanical and plumbing equipment matches the electrical drawings. Coordinate all power requirements with electrical contractor.
50. Coordinate work in kitchen with kitchen equipment contractor.
51. Provide scaffolding, rigging, hoisting, security and storage for this work.
52. Provide five (5) days' notice prior to shutdown of any system.
53. Provide all hangers and supports required for proper installation of the work described herein. Include beam clamps etc. required for a complete installation.
54. Provide final cleaning of the interior of all new equipment.
55. Cut all metal decking as required for installation of ductwork, piping, equipment thru the roof and elevated floor slab. Coordinate penetrations with steel and roof contractors.
56. Provide complete acoustical accessory package for all mechanical equipment, ductwork, plumbing equipment, accessories and curbs as indicated.
57. Install duct smoke and heat detectors in ductwork. Devices provided by electrical or special systems contractor.
58. ***Provide incoming fire water service from a point 5' outside the building. Provide all excavation and backfill required to perform this work. Provide sleeve in foundation wall as required for incoming fire water service. Include required thrust blocks. See "Fire Water Service Detail" on FP5.1 for detail.***

ALLOWANCES

Include the following allowances in the base bid. They will be billed against on a time and material basis during the project with labor rates and unit prices that will include the allowable overhead and profit. Any unused portion will be credited from the contract. The allowances can be used for another purpose at the discretion of the CM at any time:

None.

ALTERNATES

Insert the following alternate prices into the spaces provided on the bid form.

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ALTERNATE NO. 2: Add two (2) classrooms to the north end of the Base Bid building as indicated on plans and specifications.

ALTERNATE NO. 3: Add two (2) classrooms to the south end of the Alternate Bid 1 as indicated on plans and specifications.

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ALTERNATE NO. 4: Furnish and install HIAS (Acrovyn) wall protection in Vestibules A101, A113, and B106, Lobby A102, and Corridors A114, A115, A124, A135, A142, and B107 as indicated on plans and specifications

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ALTERNATE NO. 4B: Furnish and install HIAS (Acrovyn) wall protection in Vest. A154 and A156, and Corridor A155 (ref. Alternate Bid No. 2).

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ALTERNATE NO. 9A: Furnish and install FRP doors in aluminum entrance frames at door EXB102 (ref. Alternate Bid No. 1).

ALTERNATE NO. 9B: Furnish and install FRP doors in aluminum entrance frames at door EXA111 and EXA112 s (ref. Alternate Bid No. 2).

ALTERNATE NO. 9C: Furnish and install FRP doors in aluminum entrance frames at doors EXB103 and EXB104. (ref. Alternate Bid No. 3).

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ALTERNATE NO. 9D: Furnish and install FRP door in aluminum entrance frame at door EXA108 (ref. Alternate Bid No. 6)

UNIT PRICES

None.

SECTION 011200-26A – SPECIFIC SCOPE OF WORK – ELECTRICAL

SPECIFIC SCOPE – ELECTRICAL:

- A. The provisions outlined in the General Scope of Work shall apply to all items of this section. All work shall be in accordance with the schedule.
- B. This work shall include all labor, supervision, material, tools, equipment, shop drawings, submittals, layout, unloading, scaffolding, ladders, hoisting, transportation, taxes, permits, engineering, support functions, insurance, bonds, and any other items or services necessary for and reasonably incidental to the proper execution and completion of the work, whether temporary or permanent, in accordance with all drawings, specifications, addenda, general conditions, requirements, and other related documents as indicated herein. All work shall be furnished and installed unless noted otherwise herein. The scope of work shall include but not be limited to the following specific scope of work:

SPECIFICATION SECTIONS

Prepared by Gilbert Architects, dated June 23, 2020:

Volume 1: Divisions 00 – 01

Volume 2: Divisions 02 – 14

Volume 3: Divisions 21 – 33

The contractor is fully responsible for the technical specification sections as listed below for this Unit of Work. The exception to this is when the note “As Applicable” follows a technical specification section. In that case, other units of work, as defined by the Scope, may also have some responsibility for that particular section. General Conditions, Supplementary Conditions, General Requirements and General Scope Items apply to each and all of the Individual Units of Work.

Section	Description	Responsibility
Division 00	Bidding and Contract Requirements	In Its Entirety
Division 01	General Requirements	In Its Entirety
Division 03	Concrete	As Applicable
Division 04	Masonry	As Applicable
Division 05	Metals	As Applicable
Division 06	Wood, Plastics, and Composites	As Applicable
Division 07	Thermal and Moisture Protection	As Applicable
Division 08	Openings	As Applicable
Division 09	Finishes	As Applicable
Division 10	Specialties	As Applicable
Division 11	Equipment	As Applicable
Division 12	Furnishings	As Applicable
Division 21	Fire Suppression	As Applicable
Division 22	Plumbing	As Applicable
Division 23	HVAC	As Applicable
Division 26	Electrical	In Its Entirety
Division 28	Electronic Safety and Security	As Applicable
Division 31	Earthwork	As Applicable
Division 32	Exterior Improvements	As Applicable
Division 33	Utilities	As Applicable

OVERTIME NARRATIVE (FOR UNDERGROUND ELECTRICAL ACTIVITIES):

1. *This contractor shall include the following requirements for overtime:*
 - a. *(4) 10 hour days, Monday – Thursday*
 - b. *(1) 8 hour day, Friday*
 - c. *(1) 8 hour day, Saturday*
 - d. *Contractors may choose to work additional hours each day as weather permits. Each contractor must still work 6 days per week until the specific activity is complete.*
2. *Contractors shall use the overall durations of their activities to determine the number of weeks the extended hours are required.*
3. *Contractors shall work the hours above with their normal crew size, at a minimum. Crew sizes will be mutually agreed upon prior to award.*
4. *Contractors shall indicate the value of overtime labor on the bid form in the locations provided for both the base bid and applicable alternates. This value will be tracked by WT during the project.*
5. *Contractors shall also note where multiple crews and/or increased manpower will be required when activities are shown as overlapping.*
6. *Extended hours requirements shall only be “lifted” at the discretion of WT.*

SHIFT WORK NARRATIVE (FOR ELECTRICAL OVERHEAD ROUGH-IN, IN-WALL ROUGH-IN, ELECTRICAL SYSTEM DEVICES & FIXTURES):

7. *This contractor shall include the following requirements for shift work:*
 - a. *Shift 1: 7:00am – 3:30pm*
 - b. *Shift 2: 3:00pm – 11:30pm*
8. *Contractors working (2) shifts shall provide equal crew sizes, with foreman for each shift. Crew sizes will be mutually agreed upon prior to award.*
9. *Contractors shall work (2) shifts for the entire duration of the stipulated activities*
10. *Contractors shall indicate the value of overtime labor on the bid form in the locations provided for both the base bid and applicable alternates. This value will be tracked by WT during the project.*
11. *Multiple shift requirements shall only be “lifted” at the discretion of WT.*

NARRATIVE:

1. Include the cost of performance and payment bonds in the base bid.
2. Include all fall protection required to complete this contractors scope of work.
3. Furnish, install, maintain and remove temporary power and lighting. Assume separate mobilization to establish temporary service. Temporary service to be provided by installing and using permanent infrastructure. Extend underground service from existing meter location to central location within building. Reference “W-T Site Logistics Plan” for additional information. Provide temporary equipment for the temporary service if permanent equipment cannot be procured by the temp power milestone (see schedule). If this contractor cannot provide temporary electric using permanent infrastructure it will be this contractor’s responsibility to provide generators and fuel for temporary power.
4. Contractor will be responsible for maintaining, repairing, and installing all temporary lights, panels, and receptacles per CM direction. It is the CM’s intent to power permanent panels as quickly as possible to allow temporary power to be demolished and all power to be distributed through the permanent panels. Temporary power will need to be distributed to ensure all trades can work with cords no longer than 100 ft. Lighting will be needed throughout the project interior and exterior and will need to be reworked as the job progresses. Interior lighting will be supported and checked daily for any repairs that are needed. Removal of ALL temporary electrical equipment will be the responsibility of this contractor, ensure not to damage existing work in place. All temporary will be no less then OSHA requirements, refer to WT EH&S manual for additional requirements.

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5. Provide temporary lighting to meet OSHA & WT standards. Light circuits are to be separate from power circuits. The lighting is to be controlled by labeled breakers or switches and by north and south portions of the building. Relocate the temporary lights to coordinate with the installation of partitions and other work so that every room including closets or small storage areas have a minimum of one light. Refer to WT EH&S manual for additional requirements.
6. Furnish and install temporary electrical service to WT construction trailer. Service shall be minimum 200 amp. Include all temporary poles, equipment, conduit, devices, wire, etc. as required for a complete install.
7. Furnish and install four (4) exterior rated LED flood lights on the WT construction trailer, include all wiring and conduit necessary. These lights shall be "dusk to dawn" sensor controlled.
8. When directed by the Construction Manager, remove the existing temporary electrical services that were installed by this contractor, ensure not to damage existing work in place.
9. Review all drawings including civil, structural, architectural, mechanical, electrical, plumbing, fire protection and food service prior to mobilization to identify all items that need to be embedded, penetrate or generally coordinated with electrical work.
10. Furnish and install all interior and exterior electrical power and lighting systems in their entirety.
11. Furnish and install all interior and exterior conduit, raceways, and pullstrings for electrical power, lighting, fire alarm systems, special systems, security, access control, camera, and telephone and data communication systems, regardless of whether this contractor is responsible for final install of those particular systems. Coordinate locations and routing with applicable contractors.
12. Include concrete ductbanks for power and tele/data cabling and conduit as shown. Provide all excavation and backfill for underground electrical and tele/data utilities. Remove excess soil from site as required. Contractor to follow WT EH&S requirements for soft dig, see WT EH&S manual for more information.
13. Provide all underground electrical utilities, conduit, wire, handholes, manholes, quazite boxes, concrete, etc. for new incoming permanent electrical service, site lighting system, special systems and telecommunication systems.
14. Field superintendent required on-site at all times contractor's forces or subcontractor's forces are working.
15. Provide all shop drawings, submittals and mock-ups per specifications.
16. Provide warranties and guarantees as specified. Provide as-built drawings, O&M manuals and all other closeout documentation required by specifications.
17. Sub-grade to be returned to original state after completion of utility work.
18. Coordinate new permanent electrical service with utility company.
19. Provide all site lighting poles, fixtures, concrete bases (including reinforcement), anchor bolts, wiring and conduit. Include excavation and haul off of excess materials as required.
20. Provide boxes and raceways required in any poured concrete walls or floors. Coordinate with other contractors accordingly.
21. Provide conduit and wire in all exposed ceiling spaces for power and lighting. MC cable, or equivalent, not acceptable in any exposed ceiling space.
22. Provide all interior and exterior concrete pad layout required for new electrical equipment. Concrete by others.
23. Provide pull strings in ALL empty raceways.
24. Provide electrical inspections as required per construction manager schedule and as required for progress inspections.
25. Clock/speaker system, public address system, fire alarm system, AV equipment and devices, access control, intrusion detection are by others. Provide all conduit, junction boxes, and pull string required for these items.
26. All AV system work shall be provided by others. This contractor to provide all required ceiling, floor and wall rough-in and infrastructure required for all AV devices and equipment. All AV equipment, devices, components, wiring, installation for all locations shall be provided by others.

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27. All fire alarm system work shall be provided by others. This contractor to provide all required ceiling, floor and wall rough-in and infrastructure required for all fire alarm devices and equipment. All fire alarm equipment, devices, components, wiring, installation for all locations shall be provided by others.
28. All tele data work shall be provided by others. This contractor to provide all required ceiling, floor and wall rough-in and infrastructure required for all tele data devices and equipment. All tele data equipment, devices, components, wiring, installation for all locations shall be provided by others.
29. Provide any and all code-required work for fire alarm and electrical systems, if not shown on the project documents.
30. Provide any power ~~and systems~~ wiring to mechanical, fire, and/or smoke dampers.
31. Provide all grounding work as required. Provide all grounding busbars and hardware as shown or as required.
32. Provide conduit, wire and terminations to the BAS system for lighting controls or contactors.
33. Provide final connections to all kitchen equipment. Provide hard-wire connections to equipment as shown. Provide plug and cord connections to equipment as shown. Provide all wiring, conduit and connections to lights, receptacles, alarms, sensors, etc.
34. Provide power wiring and low voltage wiring and connections for electrified doors and door hardware.
35. All electrical penetrations in floors and walls to be fire/smoke/sound sealed as required.
36. Provide all lighting control devices as shown.
37. Provide final cleaning of all panels and electrical gear including interior of equipment.
38. Provide all permits and fees required. New Castle County building permit provided by Whiting-Turner.
39. Provide all labels and tags on devices, receptacles, junction boxes, and panels as required. Color code junction boxes and conduit as required by specifications.
40. Furnish and install motor starters, disconnects, and combination starters for all mechanical equipment that is not supplied with an integral device. Refer to equipment schedules.
41. Furnish and install any penetration through exterior wall or roof deck prior to spray foam and roofing contractors starting their work. If this contractor installs a penetration after this work is complete it will be this contractor's responsibility to properly patch and seal the penetration(s).
42. Include time to perform a mock fire marshal inspection for Whiting-Turner to witness prior to the actual fire marshal inspection.
43. The mechanical, plumbing, fire alarm, tele data, special systems, security and food service equipment submittals will be forwarded for review by this contractor. Report any wiring/power discrepancies to WT prior to installing the work under this contract.
44. All warranties for equipment that is used prior to final completion for construction heating or cooling shall be extended to provide owner with full term of specified warrant from date of final completion.
45. All equipment used prior to final completion shall be serviced, inspected and cleaned prior to final completion and acceptance by owner.
46. Provide start-up, testing and commissioning of all new equipment and systems as specified.
47. Provide scaffolding, rigging, hoisting, security and storage for this work.
48. Provide 5 days notice prior to shutdown of any system.
49. Provide all supports required for proper installation of this work.
50. Provide final cleaning of the interior of all new equipment.
51. Cut all metal decking as required for installation of items through the roof. Coordinate penetrations in steel and roofing contractors.
52. Provide power to monument sign. Refer to architectural and civil plans for additional information.
53. Refer to E4.2 for future telecom tie-in to existing Brick Mill Elementary School:
 - a. ~~**This contractor owns removal/reinstall of ACT or other ceiling systems required to complete this work. Return ceiling back to existing condition.**~~

- ~~b. Telecomm cable can be run within existing ceiling without conduit as code or district code allows. Cable to be routed to avoid removal of drywall ceilings and to minimize ceiling removal and patching all together. Contractor responsible for fire caulking/fire safing all penetrations through existing walls. Spacing of cable supports as per specifications required.~~
- ~~c. This contractor shall own penetrating existing building structure and shall waterproof/seal and patch back with similar material/finishes. Include any excavation required to complete this work. Return site back to existing condition.~~
- ~~d. This contractor is responsible for installing new telecom ductbank in its entirety. This contractor shall be responsible to furnish and install telecom new hand holes All excavation and backfill shall be the responsibility of this subcontractor. Installation of telecom wire and connections by the 27A subcontractor.~~

54. MEP COORDINATION:

Each MEP Contractor shall be responsible to take part in the MEP coordination process. This coordination process will be done using two dimensional drawings. The Mechanical Contractor shall be responsible to take the lead in this process, overlay all other MEP trade coordination drawings and create a totally coordinated set of MEP shop drawings that the MEP systems can be installed to. In addition as-built modifications shall also be the responsibility of the Mechanical Contractor at the completion of the project. Once all as-built modifications are made the Mechanical Contractor shall provide drawings in both hard copy and electronic format as part of the O&M documentation.

The process will be as follows: Before any coordination drawings are started a coordination meeting will be held. All MEP contractors will be required to attend. At the initial meeting the items to be discussed will be as follows.

- #1 – Electronic software to be used
- #2 – Scale to be used
- #3 – Assignments of layers to each MEP Contractor
- #4 – Sequence of design based on construction sequence through the building

After the initial meeting all MEP Contractors will be given a copy of the project backgrounds. It will be the Mechanical Contractors responsibility to make sure these backgrounds are imported onto the coordination drawings. In addition steel shop drawings will also be distributed for use in the coordination process. Each MEP Contractor will create their coordination drawings based on the layer or elevation given to them in the initial coordination meeting. If any part of their work extends out of the designated layer they are to notify both the Construction Manager and the Mechanical Contractor of this potential interference. Once notified the Mechanical Contractor will research if the potential interference impacts other systems and will present possible solutions at bi weekly coordination meeting. At the bi weekly coordination meetings these potential interferences and solutions will be discussed and the least cost solution will be utilized. All MEP Contractors are responsible to attend these bi weekly meetings and send at least 3 days in advanced updated files of their coordination drawings to the Mechanical Contractor so the coordination drawings at the meeting are current. These meeting will continue until the coordination process is complete. If an MEP Contractor does not see fit to attend these meetings or if electronic updates of their coordination drawings are not sent to the mechanical contractor in a timely fashion a \$500.00 penalty may be assessed and a credit change order issued to their contract. Please note that the coordination process is part of building the project. No additional compensation will be due for relocation of any MEP systems as part of this coordination process.

ALLOWANCES

Include the following allowances in the base bid. They will be billed against on a time and material basis during the project with labor rates and unit prices that will include the allowable overhead and profit. Any unused portion will be credited from the contract. The allowances can be used for another purpose at the discretion of the CM at any time:

None.

ALTERNATES

Insert the following alternate prices into the spaces provided on the bid form.

ALTERNATE NO. 1: Add four (4) classrooms to the south end of the Base Bid building as indicated on plans and specifications. Provide modified the casework and instructional boards in Classrooms B103, B105, B108 and B110 as indicated on plans.

ALTERNATE NO. 2: Add two (2) classrooms to the north end of the Base Bid building as indicated on plans and specifications.

ALTERNATE NO. 3: Add two (2) classrooms to the south end of the Alternate Bid 1 as indicated on plans and specifications.

ALTERNATE NO. 4: Furnish and install HIAS (Acrovyn) wall protection in Vestibules A101, A113, and B106, Lobby A102, and Corridors A114, A115, A124, A135, A142, and B107 as indicated on plans and specifications

ALTERNATE NO. 4A: Furnish and install HIAS (Acrovyn) wall protection in Vest. B116 and Corridor B117 (ref. Alternate Bid No. 1).

ALTERNATE NO. 4B: Furnish and install HIAS (Acrovyn) wall protection in Vest. A154 and A156, and Corridor A155 (ref. Alternate Bid No. 2).

ALTERNATE NO. 4C: Furnish and install HIAS (Acrovyn) wall protection in Vest. B121 and B123, and Corridor B122 (ref. Alternate Bid No. 3).

ALTERNATE NO. 5: Furnish and install ceramic tile wainscot in Vestibules A101, A113, and B106, Lobby A102, and Corridors A114, A115, A124, A135, A142, and B107 as indicated on plans and specifications.

ALTERNATE NO. 5A: Furnish and install ceramic tile wainscot in Vest. B116 and Corridor B117 (ref. Alternate Bid No. 1).

ALTERNATE NO. 5B: Furnish and install ceramic tile wainscot in Vest. A154 and A156, and Corridor B155 (ref. Alternate Bid No. 2).

ALTERNATE NO. 5C: Furnish and install ceramic tile wainscot in Vest. B121 and B123, and Corridor B122 (ref. Alternate Bid No. 3).

ALTERNATE NO. 6: Construct and fit-out Toilet room A141, accessible from playground as indicated on plans.

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ALTERNATE NO. 7A: Furnish and install playground alternate A. Refer to A12.1

ALTERNATE NO. 7B: Furnish and install playground alternate B. Refer to A12.1

ALTERNATE NO. 8: Furnish and install motorized shades at window types W4 and W5 in Multi-Purpose Room A136, including associated power tie-in by electrical contract.

ALTERNATE NO. 9: Furnish and install FRP doors in aluminum entrance frames at door, EXA102, EXA103, EXA104, EXA105, EXA106, EXA107, EXA109, EXA110, EXAB101.

ALTERNATE NO. 9A: Furnish and install FRP doors in aluminum entrance frames at door EXB102 (ref. Alternate Bid No. 1).

ALTERNATE NO. 9B: Furnish and install FRP doors in aluminum entrance frames at door EXA111 and EXA112 s (ref. Alternate Bid No. 2).

ALTERNATE NO. 9C: Furnish and install FRP doors in aluminum entrance frames at doors EXB103 and EXB104. (ref. Alternate Bid No. 3).

ALTERNATE NO. 9D: Furnish and install FRP door in aluminum entrance frame at door EXA108 (ref. Alternate Bid No. 6)

UNIT PRICES

None.

SECTION 011200-27A – SPECIFIC SCOPE OF WORK – TELEDATA

SPECIFIC SCOPE – TELEDATA:

- A. The provisions outlined in the General Scope of Work shall apply to all items of this section. All work shall be in accordance with the schedule.
- B. This work shall include all labor, supervision, material, tools, equipment, shop drawings, submittals, layout, unloading, scaffolding, ladders, hoisting, transportation, taxes, permits, engineering, support functions, insurance, bonds, and any other items or services necessary for and reasonably incidental to the proper execution and completion of the work, whether temporary or permanent, in accordance with all drawings, specifications, addenda, general conditions, requirements, and other related documents as indicated herein. All work shall be furnished and installed unless noted otherwise herein. The scope of work shall include but not be limited to the following specific scope of work:

SPECIFICATION SECTIONS

Prepared by Gilbert Architects, dated June 23, 2020:

Volume 1: Divisions 00 – 01

Volume 2: Divisions 02 – 14

Volume 3: Divisions 21 – 33

The contractor is fully responsible for the technical specification sections as listed below for this Unit of Work. The exception to this is when the note “As Applicable” follows a technical specification section. In that case, other units of work, as defined by the Scope, may also have some responsibility for that particular section. General Conditions, Supplementary Conditions, General Requirements and General Scope Items apply to each and all of the Individual Units of Work.

Section	Description	Responsibility
Division 00	Bidding and Contract Requirements	In Its Entirety
Division 01	General Requirements	In Its Entirety
Division 03	Concrete	As Applicable
Division 04	Masonry	As Applicable
Division 05	Metals	As Applicable
Division 06	Wood, Plastics, and Composites	As Applicable
Division 07	Thermal and Moisture Protection	As Applicable
Division 08	Openings	As Applicable
Division 09	Finishes	As Applicable
Division 10	Specialties	As Applicable
Division 11	Equipment	As Applicable
Division 12	Furnishings	As Applicable
Division 21	Fire Suppression	As Applicable
Division 22	Plumbing	As Applicable
Division 23	HVAC	As Applicable
Division 26	Electrical	As Applicable
Division 28	Electronic Safety and Security	As Applicable
Division 31	Earthwork	As Applicable
Division 32	Exterior Improvements	As Applicable
Division 33	Utilities	As Applicable

SHIFT WORK NARRATIVE:

1. *This contractor shall include the following requirements for shift work:*
 - a. *Shift 1: 7:00am – 3:30pm*
 - b. *Shift 2: 3:00pm – 11:30pm*
2. *Contractors working (2) shifts shall provide equal crew sizes, with foreman for each shift. Crew sizes will be mutually agreed upon prior to award.*
3. *Contractors shall work (2) shifts for the entire duration of the stipulated activities*
4. *Contractors shall indicate the value of overtime labor on the bid form in the locations provided for both the base bid and applicable alternates. This value will be tracked by WT during the project.*
5. *Multiple shift requirements shall only be “lifted” at the discretion of WT.*

NARRATIVE:

1. Include the cost of performance and payment bonds in the base bid.
2. Review all drawings including civil, structural, architectural, mechanical, electrical, plumbing, fire protection and food service prior to mobilization to identify all items that need to be embedded, penetrate or generally coordinated with this work.
3. Furnish and install all interior and exterior teledata systems.
4. Field superintendent required on-site at all times contractor’s forces or subcontractor’s forces are working.
5. Provide all shop drawings, submittals and mock-ups per specifications.
6. Provide warranties and guarantees as specified.
7. Provide all underground teledata utilities, conduit, wire, handoles, etc. for new incoming permanent telecommunication systems.
8. Provide all excavation and backfill for underground teledata utilities. Remove excess soil from site as required.
9. Provide inspections as required per construction manager schedule and as required for progress inspections.
10. Furnish and install all VoIP and data cabling, equipment, station outlets, conduit, boxes, cable tray, equipment racks, patch panels, backbone cabling, fiber optic cabling, cable support system, wire management materials, video cables, shielded audio cables, wireless access points, devices, etc. for complete telephone and data system.
11. Provide as-built drawings, O&M manuals and all other closeout documentation required by specifications.
12. Provide any and all code-required work for teledata systems, if not shown on the project documents.
13. Provide any systems wiring to mechanical fire and/or smoke dampers.
14. Provide all grounding work as required.
15. Raceways, conduit, junction boxes, and pull strings provided by the electrical contractor as indicated in the contract documents. If this contractor requires additional conduit, junction boxes, pull string above and beyond the contract document requirements than it shall be the responsibility of this contractor to provide.
16. Provide all permits and fees required. New Castle County building permit provided by Whiting-Turner.
17. Provide all labels and tags on devices, receptacles, junction boxes, and panels as required. Color code junction boxes and conduit as required by specifications.
18. All warranties for equipment that is used prior to final completion for construction heating or cooling shall be extended to provide owner with full term of specified warrant from date of final completion.
19. All equipment used prior to final completion shall be serviced, inspected and cleaned prior to final completion and acceptance by owner.
20. Provide start-up, testing and commissioning of all new equipment and systems as specified.
21. Provide scaffolding, rigging, hoisting, security and storage for this work.
22. Provide 5 days notice prior to shutdown of any system.

23. Provide all supports required for proper installation of this work.
24. Provide final cleaning of the interior of all new equipment.
25. Contractor to provide means for a temporary internet connection for construction use in the building.
This should be made available by the time permanent roof is installed.
26. ***Refer to E4.2 for future telecom tie-in to existing Brick Mill Elementary School:***
 - a. ***This contractor owns removal/reinstall of ACT or other ceiling systems required to complete this work. Return ceiling back to existing condition.***
 - b. ***Telecomm cable can be run within existing ceiling without conduit as code or district code allows. Cable to be routed to avoid removal of drywall ceilings and to minimize ceiling removal and patching all together. Contractor responsible for fire caulking/fire safing all penetrations through existing walls. Spacing of cable supports as per specifications required.***
 - c. ***This contractor shall own penetrating existing building structure and shall waterproof/seal and patch back with similar material/finishes.***
 - d. ***Electrical contractor shall provide telecom ductbank, this contractor shall be responsible for all telecom wire and connections.***

ALLOWANCES

Include the following allowances in the base bid. They will be billed against on a time and material basis during the project with labor rates and unit prices that will include the allowable overhead and profit. Any unused portion will be credited from the contract. The allowances can be used for another purpose at the discretion of the CM at any time:

None.

ALTERNATES

Insert the following alternate prices into the spaces provided on the bid form.

ALTERNATE NO. 1: Add four (4) classrooms to the south end of the Base Bid building as indicated on plans and specifications. Provide modified the casework and instructional boards in Classrooms B103, B105, B108 and B110 as indicated on plans.

ALTERNATE NO. 2: Add two (2) classrooms to the north end of the Base Bid building as indicated on plans and specifications.

ALTERNATE NO. 3: Add two (2) classrooms to the south end of the Alternate Bid 1 as indicated on plans and specifications.

ALTERNATE NO. 4: Furnish and install HIAS (Acrovyn) wall protection in Vestibules A101, A113, and B106, Lobby A102, and Corridors A114, A115, A124, A135, A142, and B107 as indicated on plans and specifications

ALTERNATE NO. 4A: Furnish and install HIAS (Acrovyn) wall protection in Vest. B116 and Corridor B117 (ref. Alternate Bid No. 1).

ALTERNATE NO. 4B: Furnish and install HIAS (Acrovyn) wall protection in Vest. A154 and A156, and Corridor A155 (ref. Alternate Bid No. 2).

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ALTERNATE NO. 4C: Furnish and install HIAS (Acrovyn) wall protection in Vest. B121 and B123, and Corridor B122 (ref. Alternate Bid No. 3).

ALTERNATE NO. 5: Furnish and install ceramic tile wainscot in Vestibules A101, A113, and B106, Lobby A102, and Corridors A114, A115, A124, A135, A142, and B107 as indicated on plans and specifications.

ALTERNATE NO. 5A: Furnish and install ceramic tile wainscot in Vest. B116 and Corridor B117 (ref. Alternate Bid No. 1).

ALTERNATE NO. 5B: Furnish and install ceramic tile wainscot in Vest. A154 and A156, and Corridor B155 (ref. Alternate Bid No. 2).

ALTERNATE NO. 5C: Furnish and install ceramic tile wainscot in Vest. B121 and B123, and Corridor B122 (ref. Alternate Bid No. 3).

ALTERNATE NO. 6: Construct and fit-out Toilet room A141, accessible from playground as indicated on plans.

ALTERNATE NO. 7A: Furnish and install playground alternate A. Refer to A12.1

ALTERNATE NO. 7B: Furnish and install playground alternate B. Refer to A12.1

ALTERNATE NO. 8: Furnish and install motorized shades at window types W4 and W5 in Multi-Purpose Room A136, including associated power tie-in by electrical contract.

ALTERNATE NO. 9: Furnish and install FRP doors in aluminum entrance frames at door, EXA102, EXA103, EXA104, EXA105, EXA106, EXA107, EXA109, EXA110, EXAB101.

ALTERNATE NO. 9A: Furnish and install FRP doors in aluminum entrance frames at door EXB102 (ref. Alternate Bid No. 1).

ALTERNATE NO. 9B: Furnish and install FRP doors in aluminum entrance frames at door EXA111 and EXA112 s (ref. Alternate Bid No. 2).

ALTERNATE NO. 9C: Furnish and install FRP doors in aluminum entrance frames at doors EXB103 and EXB104. (ref. Alternate Bid No. 3).

ALTERNATE NO. 9D: Furnish and install FRP door in aluminum entrance frame at door EXA108 (ref. Alternate Bid No. 6)

UNIT PRICES

None.

SECTION 011200-31A – SPECIFIC SCOPE OF WORK – SITEWORK

SPECIFIC SCOPE – SITEWORK:

- A. The provisions outlined in the General Scope of Work shall apply to all items of this section. All work shall be in accordance with the schedule.
- B. This work shall include all labor, supervision, material, tools, equipment, shop drawings, submittals, layout, unloading, scaffolding, ladders, hoisting, transportation, taxes, permits, engineering, support functions, insurance, bonds, and any other items or services necessary for and reasonably incidental to the proper execution and completion of the work, whether temporary or permanent, in accordance with all drawings, specifications, addenda, general conditions, requirements, and other related documents as indicated herein. All work shall be furnished and installed unless noted otherwise herein. The scope of work shall include but not be limited to the following specific scope of work:

SPECIFICATION SECTIONS

Prepared by Gilbert Architects, dated June 23, 2020:

Volume 1: Divisions 00 – 01

Volume 2: Divisions 02 – 14

Volume 3: Divisions 21 – 33

The contractor is fully responsible for the technical specification sections as listed below for this Unit of Work. The exception to this is when the note “As Applicable” follows a technical specification section. In that case, other units of work, as defined by the Scope, may also have some responsibility for that particular section. General Conditions, Supplementary Conditions, General Requirements and General Scope Items apply to each and all of the Individual Units of Work.

Section	Description	Responsibility
Division 00	Bidding and Contract Requirements	In Its Entirety
Division 01	General Requirements	In Its Entirety
Division 03	Concrete	As Applicable
Division 04	Masonry	As Applicable
Division 05	Metals	As Applicable
Division 06	Wood, Plastics, and Composites	As Applicable
Division 07	Thermal and Moisture Protection	As Applicable
Division 08	Openings	As Applicable
Division 09	Finishes	As Applicable
Division 10	Specialties	As Applicable
Division 11	Equipment	As Applicable
Division 12	Furnishings	As Applicable
Division 21	Fire Suppression	As Applicable
Division 22	Plumbing	As Applicable
Division 23	HVAC	As Applicable
Division 26	Electrical	As Applicable
Division 28	Electronic Safety and Security	As Applicable
Division 31	Earthwork	In Its Entirety
Division 32	Exterior Improvements	In Its Entirety
Division 33	Utilities	In Its Entirety

OVERTIME NARRATIVE (INCLUDES ALL ACTIVITIES LEADING UP TO, AND INCLUDING, BASE PAVING. INCLUDES INFILTRATION BASINS, FINAL GRADING, AND PARKING LOT TIE-INS):

1. *This contractor shall include the following requirements for overtime:*
 - a. *(4) 10 hour days, Monday – Thursday*
 - b. *(1) 8 hour day, Friday*
 - c. *(1) 8 hour day, Saturday*
 - d. *Contractors may choose to work additional hours each day as weather permits. Each contractor must still work 6 days per week until the specific activity is complete.*
2. *Contractors shall use the overall durations of their activities to determine the number of weeks the extended hours are required.*
3. *Contractors shall work the hours above with their normal crew size, at a minimum. Crew sizes will be mutually agreed upon prior to award.*
4. *Contractors shall also note where multiple crews and/or increased manpower will be required when activities are shown as overlapping.*
5. *Extended hours requirements shall only be “lifted” at the discretion of WT.*

NARRATIVE:

1. Include the cost of performance and payment bonds in the base bid.
2. Arrange for and coordinate with Miss Utility and other applicable entities to identify and locate existing utilities.
3. Provide, maintain and remove all erosion and sediment control measures as shown. Include all inlet protection.
4. Provide and maintain all site stabilization as indicated.
5. Provide, maintain and remove stabilized construction entrances as shown. Provide new drain piping at existing gravel entrance on Brick Mill Road to promote proper drainage. Place stone and/or asphalt millings to blend existing grades between Brick Mill Road and existing gravel lot.
6. Perform all work in accordance with sequence of construction on documents.
7. Provide, maintain and remove wash area for trucks and equipment at exit on Brick Mill Road.
8. Provide all site demolition (including, but not limited to, earthwork, stone, asphalt, and concrete), clearing and grubbing as indicated. Investigate site and remove all items required to complete all items of work.
9. Provide dewatering and mucking necessary to complete all items of work.
10. Review geotechnical report and include all work associated with existing soil conditions including fill requirements and ground water conditions. Take note of topsoil depths and rock locations.
11. This contractor shall include rock and boulder removal provided the encountered rock and boulders can be removed with the use of a CAT 325 excavator (or similar).
12. Provide all site utilities including domestic water piping, fire water piping and hydrants, storm piping, rainwater conductor piping and sanitary piping to a point within 5’ of building. Assume final connections for all utilities are by this contractor. Perform pressure testing on all piping. Provide flushing, cleaning and sterilizing of domestic and fire water piping.
13. Provide sanitary sewer system including excavation, backfill, inspections, testing, setting beds, piping, manholes, structures, etc. Coordinate shutdown with local agencies. Notify adjacent residences of disturbance to existing services to complete this work. Coordinate with mechanical contractor for work at grease trap.
14. Provide new fire water and domestic water piping and hydrants. ~~*Work by this contractor to begin at the new valves shown at the property line. Valves to be furnished and installed by others. Include water meter pit per Artesian Water standards.*~~
15. New water main piping to be installed as dictated in the project schedule to allow for water usage during construction. Provide 2” temporary water hydrant at location determined by Whiting-Turner.

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16. Provide all fire hydrants. Confirm fire hydrants comply with local authorities having jurisdiction. Include color coordinated painted hydrant tops as required.
17. Review plumbing drawings for sanitary and storm piping connecting to your work.
18. Provide all stormwater management items including piping, structures, manholes, catch basins, concrete cradles, underdrain, rainwater conductor piping, SWM facility, outlet structure, gabion baskets, clay core trenches, rip rap, mulch, filter strips, gravel trenches, etc. Provide all excavation, backfill and bedding materials.
19. Adjust existing manhole elevations as indicated.
20. Furnish and install all filter strips and gravel trenches.
21. Provide all RWC lateral piping as shown from roof downspout to RWC main. Downspout boot provided by this contractor, coordinate attachment of downspout boot with exterior façade contractor(s).
22. Provide all grading as required for SWM facility.
23. Provide seeding and stabilization at SWM facility upon completion.
24. All temporary SWM items to be removed upon completion.
25. Provide dewatering, clearing and mucking of SWM immediately prior to substantial completion.
26. Provide all site preparation, earthwork, excavation, filling, grading and equipment to achieve final design grades.
27. All finish grades are to be properly blended to allow smooth transitions.
28. Protect and/or avoid all existing underground utilities. Protect all existing utility and utility structures shown to remain but are within the LOD.
29. Provide for preparation of new, compacted building pad for new school building to a sub-grade elevation of finish floor of minus concrete slab thickness and minus stone sub-base thickness. Margin of error 0.2'. Coordinate with structural drawings. Provide proof rolling of building pad subgrade. Structural fill shall extend 5' outside perimeter of building. Building pad to be accepted and approved by geotechnical engineer.
30. Provide and import suitable soils and structural fill to establish new building pad elevations.
31. All excess soils and excess topsoil shall be removed from site.
32. Any stockpile backfill shall be covered and protected.
33. Provide all site concrete items including grading, sub-base preparation, thrust blocks, expansion joints, control joints, vertical concrete curbs, depressed concrete curbs, concrete parking bumpers, sidewalks, concrete steps, concrete retaining walls, handicapped ramps with truncated domes as detailed. Provide dumpster pad as detailed. Include the cost to caulk exterior concrete control and expansion joints as indicated. Stairs and ramp connected to building (see A7.1) are by the concrete contractor.
34. Provide all asphalt paving, compacted stone sub-base, proofrolling, asphalt base course and asphalt topping course as detailed. Base paving and topcoat paving to be completed in separate mobilizations per the project schedule. Provide tie-in to all existing asphalt as indicated.
35. Provide all parking lot and fire lane signage and striping as shown. Include crosswalk striping. Include all parking bumpers as detailed.
36. Provide all safety measures and controls, traffic controls, etc. to comply with all OSHA safety regulations in order to complete this work.
37. Provide continuous site cleaning of project site and adjacent streets resulting from this work. Provide street cleaning along Brick Mill Road and existing elementary school drive lanes as needed. Mud and debris on Brick Mill Road and surround roads resulting from this work must be removed immediately.
38. Field superintendent required on-site at all times contractor's forces or subcontractor's forces are working.
39. Provide all pipe bollards as shown, include concrete footer and filling post with concrete. Painting by others.
40. Provide all fencing shown.

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41. Provide all permits and fees required. New Castle County building permit provided by Whiting-Turner. Provide New Castle County Land Use utility permits as required.
42. Provide final topsoil placement and grading at all disturbed areas. Rake topsoil to remove all stone and debris.
43. Provide final seeding as specified. Submit seeding mix design prior to installation. Provide watering as required until new seeded areas are established. Provide (2) mowings of newly seeded grass areas after established.
44. Provide all temporary power required to complete your work.
45. Provide all steel pipe gates. Include concrete footings as shown.
46. Furnish, install, and maintain a 20'-0" wide, 8" thick stone construction road around the entire perimeter of the building. Road width will start at foundation wall of the building and extend 20'-0" out. Include compaction of substrate and stone. Provide geo-textile fabric underneath to help stabilize. Include the cost to remove this material upon completion of exterior façade work and prior to final grading/topsoil.
47. Furnish, install, and maintain a 70'x60', 8" thick stone parking lot in front of the WT construction trailer (see logistics plan for approximate location and layout). Provide geo-textile fabric underneath to help stabilize. Include the cost to remove this material and restore this area when directed by WT.
48. Furnish, install, and maintain the extended stabilized construction entrance roadway. This roadway will extend from the stabilized construction entrance to the location of the permanent parking lot (roadway to meet at the northern most end of the parking lot). Include the cost to remove this material and restore this area when directed by WT.
49. This contractor shall own demoing existing curb, asphalt, subbase, etc. as required to install/tie-in new utilities.
50. This contractor shall be responsible for restoring existing areas upon completion of new work.
51. It is this contractor's responsibility to follow all WT EH&S guidelines for utility location prior to digging. This includes multiple mobilizations for soft dig utility locating. Refer to WT EH&S Manual for more information.
52. Furnish and install stone building border as indicated. See CC-02 for detail.
53. Furnish and install all bike racks as indicated, include concrete footings.
54. Provide all asbuilts as required.
55. ASPHALT CEMENT COST ADJUSTMENT – Payments to the Contractor shall be adjusted to reflect increase or decreases in the Delaware Posted Asphalt Cement Price at time of placement when compared to the Asphalt Cement Base Price at time of bid. The Delaware Posted Asphalt Cement Price will be issued monthly by the Department. Actual quantity of asphalt cement qualifying for any Asphalt Cement Cost Adjustment will be computed on the basis of weight tickets and asphalt percentage from the approved job mix formula. The Asphalt cement cost adjustment will be calculated on grade PG 64-22 asphalt regardless of the actual grade of asphalt used. The Project Asphalt Cement Base Price for the project will be based on the April of 2020 price posted on DelDOT's website. If the Contractor exceeds the authorized allotted completion time, the price of asphalt cement on the last authorized allotted work day, shall be the prices used for cost adjustment. However, if the industry posted price for asphalt cement goes down, the asphalt cement cost shall be adjusted downward accordingly.

ALLOWANCES

Include the following allowances in the base bid. They will be billed against on a time and material basis during the project with labor rates and unit prices that will include the allowable overhead and profit. Any unused portion will be credited from the contract. The allowances can be used for another purpose at the discretion of the CM at any time:

None.

ALTERNATES

Insert the following alternate prices into the spaces provided on the bid form.

ALTERNATE NO. 1: Add four (4) classrooms to the south end of the Base Bid building as indicated on plans and specifications. Provide modified the casework and instructional boards in Classrooms B103, B105, B108 and B110 as indicated on plans.

ALTERNATE NO. 2: Add two (2) classrooms to the north end of the Base Bid building as indicated on plans and specifications.

ALTERNATE NO. 3: Add two (2) classrooms to the south end of the Alternate Bid 1 as indicated on plans and specifications.

ALTERNATE NO. 4: Furnish and install HIAS (Acrovyn) wall protection in Vestibules A101, A113, and B106, Lobby A102, and Corridors A114, A115, A124, A135, A142, and B107 as indicated on plans and specifications

ALTERNATE NO. 4A: Furnish and install HIAS (Acrovyn) wall protection in Vest. B116 and Corridor B117 (ref. Alternate Bid No. 1).

ALTERNATE NO. 4B: Furnish and install HIAS (Acrovyn) wall protection in Vest. A154 and A156, and Corridor A155 (ref. Alternate Bid No. 2).

ALTERNATE NO. 4C: Furnish and install HIAS (Acrovyn) wall protection in Vest. B121 and B123, and Corridor B122 (ref. Alternate Bid No. 3).

ALTERNATE NO. 5: Furnish and install ceramic tile wainscot in Vestibules A101, A113, and B106, Lobby A102, and Corridors A114, A115, A124, A135, A142, and B107 as indicated on plans and specifications.

ALTERNATE NO. 5A: Furnish and install ceramic tile wainscot in Vest. B116 and Corridor B117 (ref. Alternate Bid No. 1).

ALTERNATE NO. 5B: Furnish and install ceramic tile wainscot in Vest. A154 and A156, and Corridor B155 (ref. Alternate Bid No. 2).

ALTERNATE NO. 5C: Furnish and install ceramic tile wainscot in Vest. B121 and B123, and Corridor B122 (ref. Alternate Bid No. 3).

ALTERNATE NO. 6: Construct and fit-out Toilet room A141, accessible from playground as indicated on plans.

ALTERNATE NO. 7A: Furnish and install playground alternate A. Refer to A12.1

ALTERNATE NO. 7B: Furnish and install playground alternate B. Refer to A12.1

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ALTERNATE NO. 8: Furnish and install motorized shades at window types W4 and W5 in Multi-Purpose Room A136, including associated power tie-in by electrical contract.

ALTERNATE NO. 9: Furnish and install FRP doors in aluminum entrance frames at door, EXA102, EXA103, EXA104, EXA105, EXA106, EXA107, EXA109, EXA110, EXAB101.

ALTERNATE NO. 9A: Furnish and install FRP doors in aluminum entrance frames at door EXB102 (ref. Alternate Bid No. 1).

ALTERNATE NO. 9B: Furnish and install FRP doors in aluminum entrance frames at door EXA111 and EXA112 s (ref. Alternate Bid No. 2).

ALTERNATE NO. 9C: Furnish and install FRP doors in aluminum entrance frames at doors EXB103 and EXB104. (ref. Alternate Bid No. 3).

ALTERNATE NO. 9D: Furnish and install FRP door in aluminum entrance frame at door EXA108 (ref. Alternate Bid No. 6)

ALTERNATE NO. 10: Furnish and install cement stabilized subgrade. See CC-02.

UNIT PRICES – Note: The owner reserves the right to request lump sum pricing for extra work in lieu of applying unit prices.

1. Remove unsuitable soils off-site and replace with imported select fill, per c.y.
2. Remove unsuitable soils off-site and replace with 57 stone, per c.y.
3. Rock removal and disposal off-site, per c.y.
4. Import and place select fill, per c.y.
5. Import and place #57 clean stone, per c.y.
6. Asphalt paving, base course per typical detail, per ton.
7. Asphalt paving, top course per typical detail, per ton.

SECTION 321816.13 - PLAYGROUND PROTECTIVE SURFACING

PART 1 - GENERAL

1.1 WORK INCLUDED

- A. This work includes finishing and installing the specified safety surface(s).

1.2 DESCRIPTION OF SYSTEM

- A. SEAMLESS SURFACING shall be poured-in-place to provide a resilient, rubber surface installed over a base as specified. The surfacing contractor shall be responsible for all labor, materials, tools, and equipment to perform all work and services for the installation of the surface.

1.3 QUALITY ASSURANCE

- A. Impact attenuation test results will be provided to the owner's representative. This will also include HIC test results. Test results shall meet or exceed ASTM-F1292-04 Impact Attenuation Guidelines of 200 G's or less from the actual fall height. HIC test results shall be less than 1000 at this fall height. Surface shall be accessible per ASTM- F1951-99 Determination of Accessibility of Surface Systems under and Around Playground Equipment. Surfacing should be installed per ASTM and CPSC guidelines.

PART 2 - PRODUCTS

2.1 SEAMLESS SURFACING MANUFACTURER

Safety Turf, Inc., 201 N. 4th Ave., Royersford, PA 19468, 610-792-0967
Robertson Industries, Inc.
BYO Recreation, or an approved equivalent manufacturer.

2.2 SEAMLESS SURFACING MATERIALS

- A. POURED BASE LAYER - A precise combination of recycled SBR and Butyl rubber mixed on site with a MDI polyurethane prepolymer binder. Recbase® or an approved equivalent may be used in conjunction with base rubber for thicknesses over 3".
- B. POURED 1/2" TOP LAYER – EPDM or TPV rubber granules (1-4mm size) and a solvent free, enhanced UV stable, MDI polyurethane prepolymer binder. (Note: An aliphatic binder may be used if initial "yellowing" of light-colored granules is undesirable)
- C. COLOR- Colors will be chosen by owner or owner's representative

2.3 ORGANIC LOOSE-FILL SURFACING MANUFACTURER

Zeager Bros., Inc., 4000 East Harrisburg Pike, Middletown, Pennsylvania 17057. Phone (717) 944-7481.

2.4 ORGANIC LOOSE-FILL SURFACING MATERIALS

A. ENGINEERED WOOD FIBER PLAYGROUND SURFACING: WOODCARPET

Composition:

1. 100% pre-consumer recovered wood or from 100% post-consumer recovered wood.
2. Free of soil, leaves, twigs, and other contaminants which hasten decomposition.
3. Free of chemical treatments and additives.

Dimensions:

1. Randomly sized. Per sieve analysis EWF standard ASTM F2075 : Meets Criteria

Properties:

1. Hazardous Metal, ASTM F 2075: Meets Criteria
2. Tramp Metal, ASTM F 2075: Meets Criteria
3. Coefficient of Permeability, ASTM D 2434: Greater than 0.6 cm/s.
4. Moisture Absorption: Maximum of 150 percent by weight.
5. Moisture Content: 25 to 60 percent by weight.
6. Density: 15 to 24 pounds per cubic foot.
7. Impact, ASTM F 1292-04: Meets criteria.
8. IPEMA Certified: 8 inch thickness rated to 8 feet and 12 inch thickness to 12 feet.

B. DRAINAGE FABRIC: DURALINER

Composition:

1. Non-woven, needle-punched, UV-treated polypropylene or spunbonded polyester fabric.
2. Recycled content: 10% post-consumer and 10% or more of pre-consumer (post manufacturing).
3. Size: 5 to 6 feet wide x 250 feet long.
4. Weight, ASTM D3776: Min. 3.24 ounces per square yard
5. Grab Tensile Strength: ASTM D4632: min. 81/79 pounds.
6. Elongation: 59/63
7. Mullen Burst Strength, ASTM D3786: min. 130 pounds.
8. Puncture Resistance, ASTM D4833: min. 45.1 pounds.
9. Trapezoid Tearing Strength, ASTM D4533: min. 42/71 pounds.
10. Permittivity, ASTM D4491: min. 2.09 sec-1.
11. Flow Rate, ASTM D4491: min. 300 gal/ft/min

PART 3 - PROCEDURE

3.1 SEAMLESS SURFACING

- A. Sub Base: Compacted stone base. This base shall be prepared with a minimum of 4” of DE #57 stone that is spread and compacted to a flat surface leaving the thickness of the required safety surface below finish level.
- B. Installation:
 1. THICKNESS - Total minimum depth of the safety surface will be 2”. The thickness may be adjusted to meet the fall height requirements noted in section 1.1.2.

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2. **POURED BASE LAYER** - The 1 ½" min. layer of recycled SBR/Butyl will be mixed on site with a MDI polyurethane prepolymer binder in a mortar mixer. Mix until they are coated uniformly. This layer will be poured in place by means of a screed and hand trowel. Edge conditions shall be per project requirements. The minimum temperature requirement for installation of the base layer is 40 degrees and rising. Cure time increases at lower temperatures and humidity. (Note: This layer will be adjusted to the correct thickness per fall height requirements. Recbase® or an approved equivalent, may be used in conjunction with rubber base layer for thicknesses 3" or better.)
3. **POURED TOP LAYER** - The 1/2" poured top layer shall be composed of EPDM or TPV granular rubber. The EPDM or TPV rubber is mixed on site with a MDI polyurethane prepolymer binder in a mortar mixer. Mix granules until they are coated uniformly. The top layer will be poured-in-place and hand trowel or rolled. If the safety matting is installed over existing asphalt or concrete, the EPDM or TPV granules will be troweled into the keyway to provide a smooth transition from the existing surface onto the safety matting. The minimum temperature requirement for installation of the top layer is 50 degrees and rising. Cure time increases at lower temperatures and humidity. Day seams may be required for areas greater than 3,000 square feet. Edges - Surface edges shall be flush with the edge of adjacent area or be such that there is a smooth transition onto the safety matting from the existing surface, or per owner's requirements.
4. **POROSITY** - Surface shall be porous to the extent of allowing the equivalent of 12" per hour of rainfall to flow through it.
5. **TRACTION** - Surface shall be non-skid, wet or dry.
6. **SOFTNESS** - Surface deflection with a 30 lb. Load shall be ¼" to ½" with 99% recovery.
7. **HEALTH & ENVIRONMENT AFTER CURING** - Surface shall be non-toxic, non-allergenic and non-polluting.

3.2 ORGANIC LOOSE-FILL SURFACING

A. Installation:

1. **DURALINER** fabric is placed both below and above aggregate drainage material to create a weed barrier and to prevent the aggregate from mixing with the subsurface and the engineered wood fiber.

3.3 PROTECTION

The safety surface should be protected from foot traffic for a minimum of 24 hours after installation to allow surface to cure. Note: This curing time may be longer in colder weather.

END OF SECTION

PRECAST CONCRETE
PROFILE "A"

METAL COPING WITH
CONTINUOUS HOLD-
DOWN CLEATS

"GROUND-FACE"
MASONRY VENEER
(8" x 16")

FLAT-LOCK METAL
PANELS (12" x 24")
"SLATE BLUE"

UTILITY BRICK

HORIZONTAL PANEL
METAL SIDING (12") -
"STONE"

ALUMINUM
WINDOW

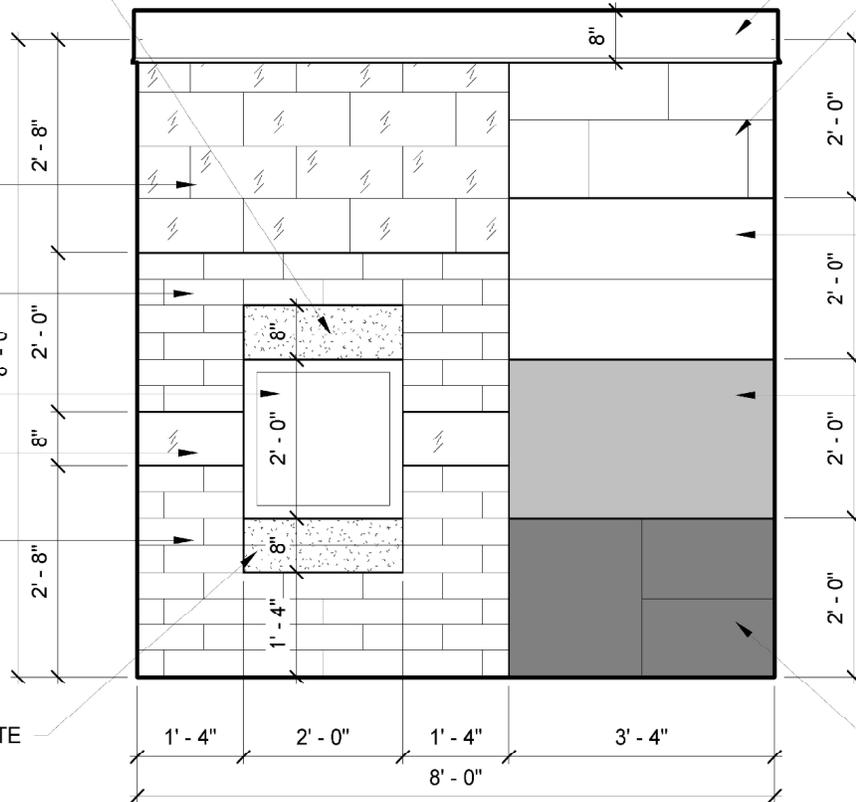
HORIZONTAL PANEL
METAL SIDING (12") -
"DOVE GREY"

"GROUND-FACE"
MASONRY VENEER
(8" x 16") BAND

UTILITY BRICK

PRECAST CONCRETE
SILL PROFILE "B"

FLAT-LOCK METAL
PANELS (20" x 40")
"MUSKET GREY"



4

6

A5.1

MOCK-UP PANEL ELEVATION

1/2" = 1'-0"

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ADDITIONAL MOCK-UP PANEL
ELEVATION - NOT TO SCALE

ADDENDUM NO. 4

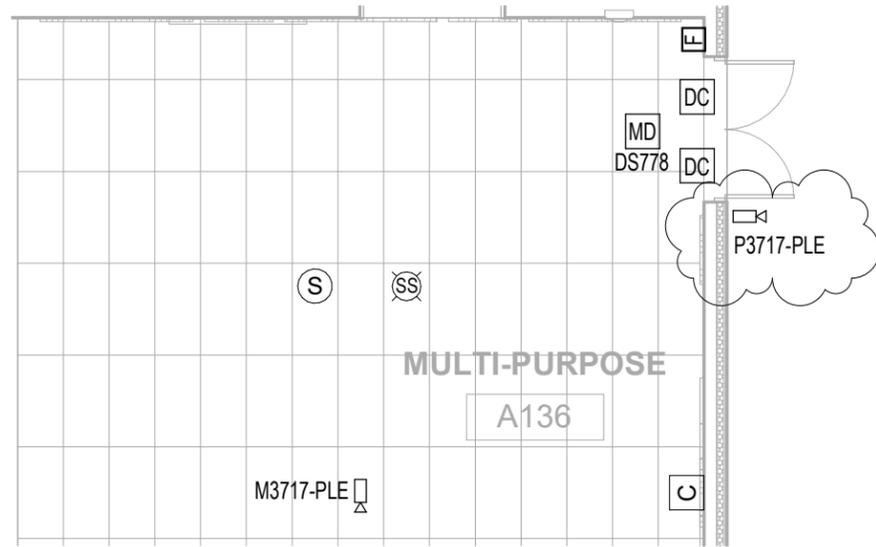
DATE 07/20/2020

GAI PROJECT NO. 2001

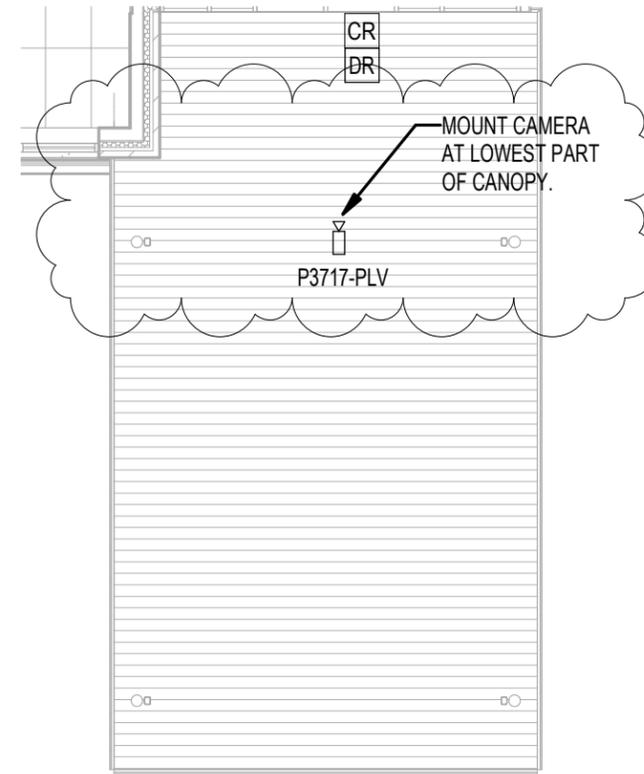
DRAWN BY JCB

SK-A-002

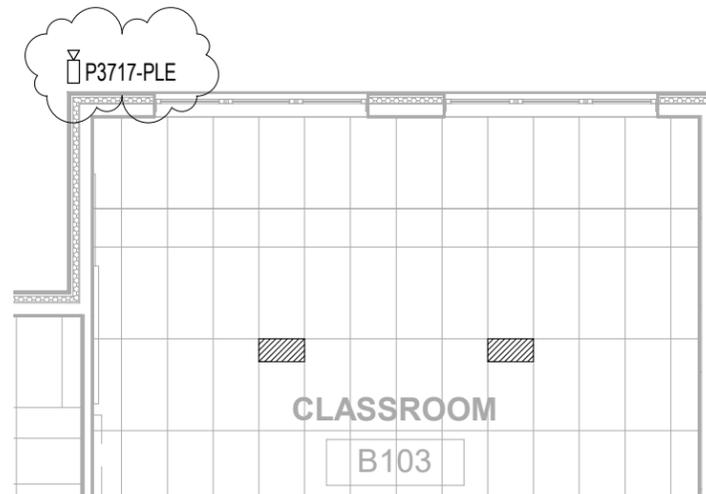
REF. DWG. A5.1



1 PARTIAL FIRST FLOOR SPECIAL SYSTEMS PLAN - AREA "A" -
MULTI-PURPOSE A136
1/8" = 1'-0"



2 PARTIAL FIRST FLOOR SPECIAL SYSTEMS PLAN - AREA "A" -
MAIN LOBBY CANOPY
1/8" = 1'-0"



3 PARTIAL FIRST FLOOR SPECIAL SYSTEMS PLAN - AREA "B" -
CLASSROOM B103
1/8" = 1'-0"

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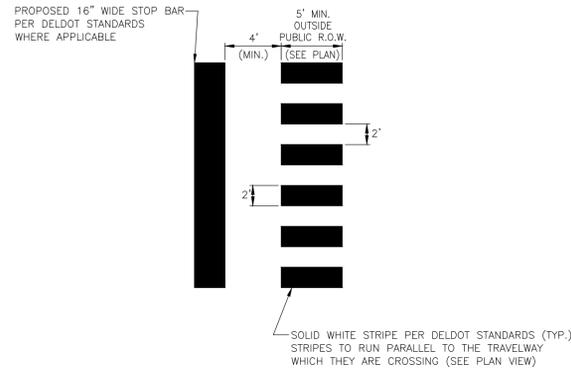
BRICK MILL EARLY CHILDHOOD CENTER

PARTIAL FIRST FLOOR SPECIAL SYSTEM PLAN - AREA "A" & AREA "B"

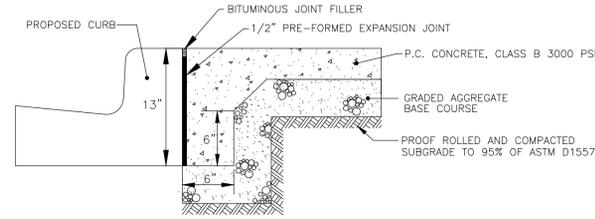
DATE	07/21/2020
GAI PROJECT NO.	2001
CAD NO.	-
DRAWN BY	DESIGNER
REF. DWG.	E3.1

SK-E-01

CROSS-SLOPE OF CROSSWALKS CANNOT BE GREATER THAN 2%

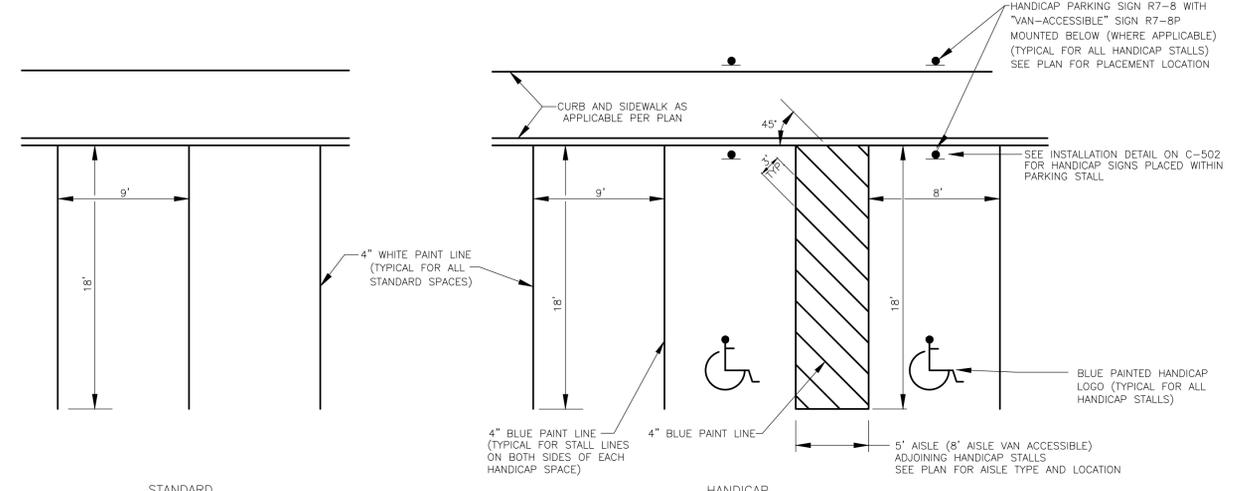


PAINTED CROSSWALK DETAIL
N.T.S.

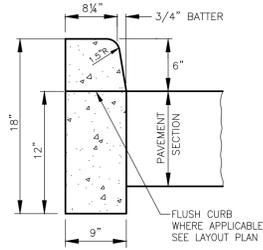


P.C.C. SIDEWALK TURNDOWN ADJACENT TO CURB
N.T.S.

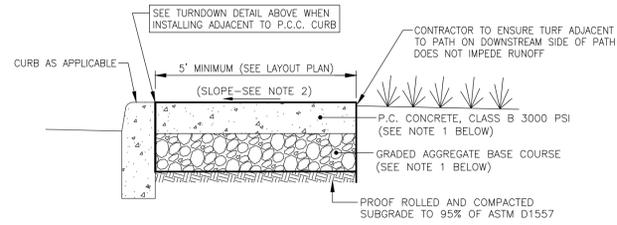
SLOPE OF HANDICAP PARKING STALLS AND AISLES CANNOT BE GREATER THAN 2% IN ALL DIRECTIONS



TYPICAL PARKING STALL LAYOUT
N.T.S.

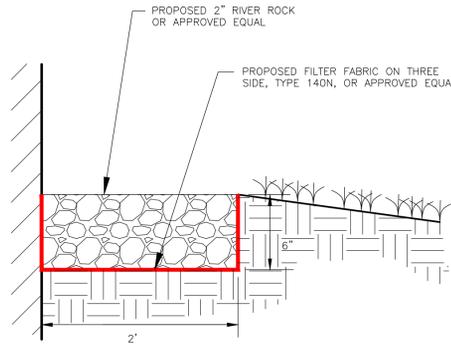


P.C.C. CURB TYPE 1-6
NO SCALE

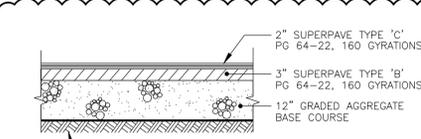


- NOTES:**
- STANDARD SIDEWALK SHALL BE 4" THICK PLACED OVER 4" GABC. SIDEWALK FOR AREAS DESIGNATED TO RECEIVE "HEAVY DUTY" SIDEWALK, AS WELL AS DEPRESSED AND TRANSITION AREAS SHALL BE 6" THICK PLACED OVER 6" GABC.
 - SIDEWALK TO BE CONSTRUCTED AT GRADE. CROSS-SLOPE OF SIDEWALK SHALL BE 1.5% (1% MIN. AND 2% MAX.) IN ORDER TO ASSURE POSITIVE DRAINAGE.
 - SIDEWALK SHALL BE MARKING INTO RECTANGULAR SLABS 5' LONG BY SCORING, 1/2" MINIMUM, WITH APPROVED EDGING TOOLS. THE SURFACE EDGES OF EACH SLAB SHALL BE ROUNDED TO 1/4" RADIUS.
 - EXPANSION JOINTS SHALL EXTEND FROM THE SURFACE TO THE FOUNDATION AND MUST BE AT RIGHT ANGLES TO THE SIDEWALK SURFACE. A 1/2" EXPANSION JOINT SHALL BE PLACED ACROSS THE WALK EVERY 20'. EXPANSION MATERIAL SHALL ALSO BE PLACED LONGITUDINALLY ALONG ONE SIDE WHEN SIDEWALK IS PLACED BETWEEN CURBS, PAVEMENTS, OR ANY FIXED STRUCTURES.
 - CONCRETE SIDEWALKS SHALL BE CONSTRUCTED IN CONFORMANCE WITH SECTION 705 OF THE STANDARD SPECIFICATIONS MANUAL.

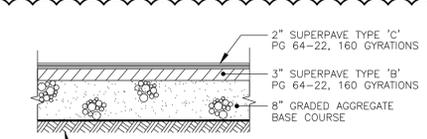
SIDEWALK DETAIL
NO SCALE



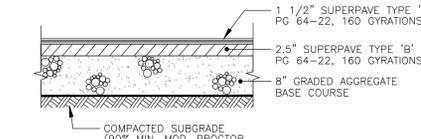
STONE BUILDING BORDER DETAIL
N.T.S.



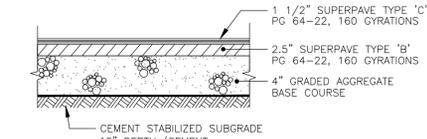
HEAVY DUTY PAVEMENT SECTION (BASE BID)
N.T.S.



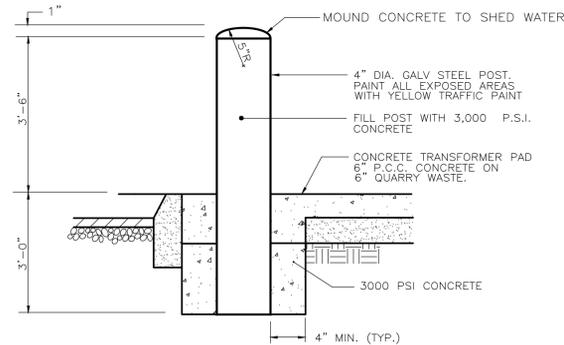
HEAVY DUTY PAVEMENT SECTION (ALTERNATIVE BID)
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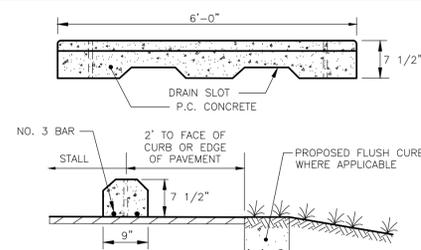
STANDARD PAVEMENT SECTION (BASE BID)
N.T.S.



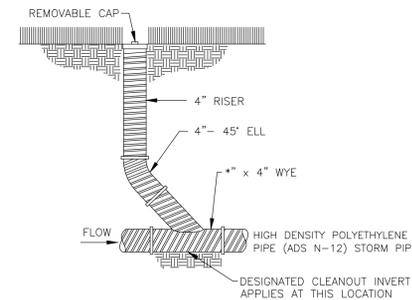
STANDARD PAVEMENT SECTION (ALTERNATIVE BID)
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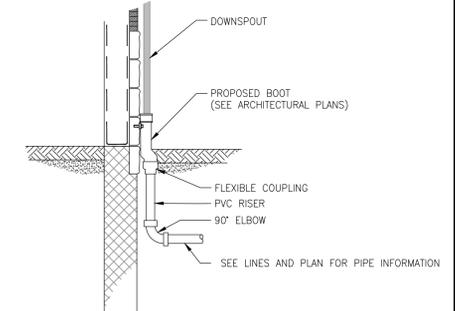
STANDARD BOLLARD DETAIL
N.T.S.



UN-PINNED CONCRETE BUMPER BLOCK
N.T.S.



ROOF LEADER SYSTEM CLEANOUT DETAIL
N.T.S.



DOWNSPOUT BOOT CONNECTION DETAIL
N.T.S.

LANDMARK SCIENCE & ENGINEERING
7/1/2020

CHECKED	7-1-20
REVISIONS	
1. ADDENDUM #3	

SITE CONSTRUCTION DETAILS
BRICK MILL
EARLY CHILDHOOD CENTER
MIDDLETOWN HUNDRED - NEW CASTLE COUNTY, DELAWARE

OWNER:
APPOULMINNAK SCHOOL DISTRICT
118 S. SIXTH STREET, P.O. BOX 4010
MIDDLETOWN, DE 19709
302-376-4014

200 CONTINENTAL DRIVE
NEWARK, DE 19713
PHONE (302) 323-3377
WWW.LANDMARK-SE.COM
INFO@LANDMARK-SE.COM

201 RESEARCH BLVD.,
ARBDORITE 140 21001
PHONE (410) 393-4144
FAX (410) 352-9464
INFO@LANDMARK-SE.COM

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THIS DRAWING DOES NOT INCLUDE ALL CONSTRUCTION DETAILS FOR CONSTRUCTION. SEE ALL OTHER DRAWINGS FOR COMPLETE CONSTRUCTION DETAILS. ALL CONSTRUCTION MUST BE DONE IN ACCORDANCE WITH THE HEALTH AND SAFETY ACT OF 1970 AND THE HEALTH AND SAFETY REGULATIONS THEREOF. APPROVE HEREIN.

DRAWN BY: MKB
DESIGN BY: MKB
CHECK BY: TCW

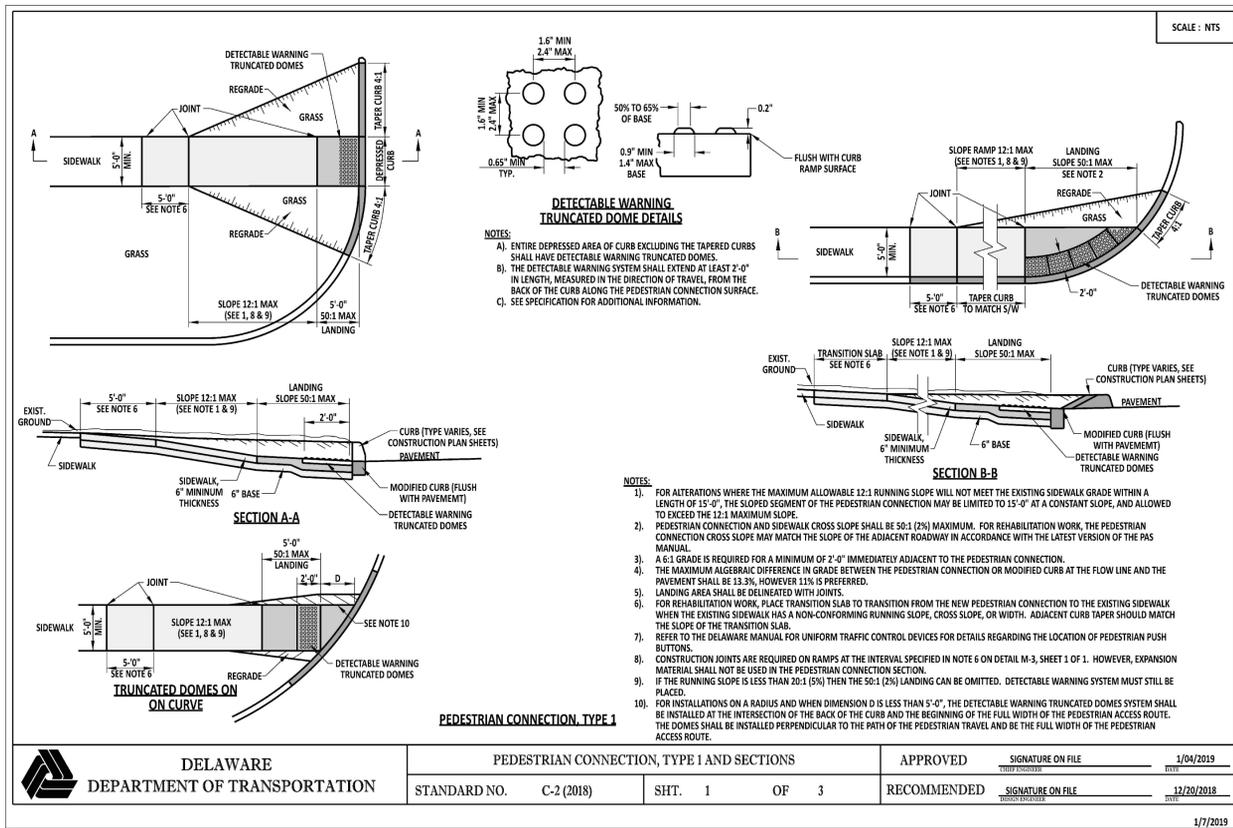
DATE: 05/01/2020
SHEET: CC-02 of 38

COMMISSION: C2891-1

CC-02

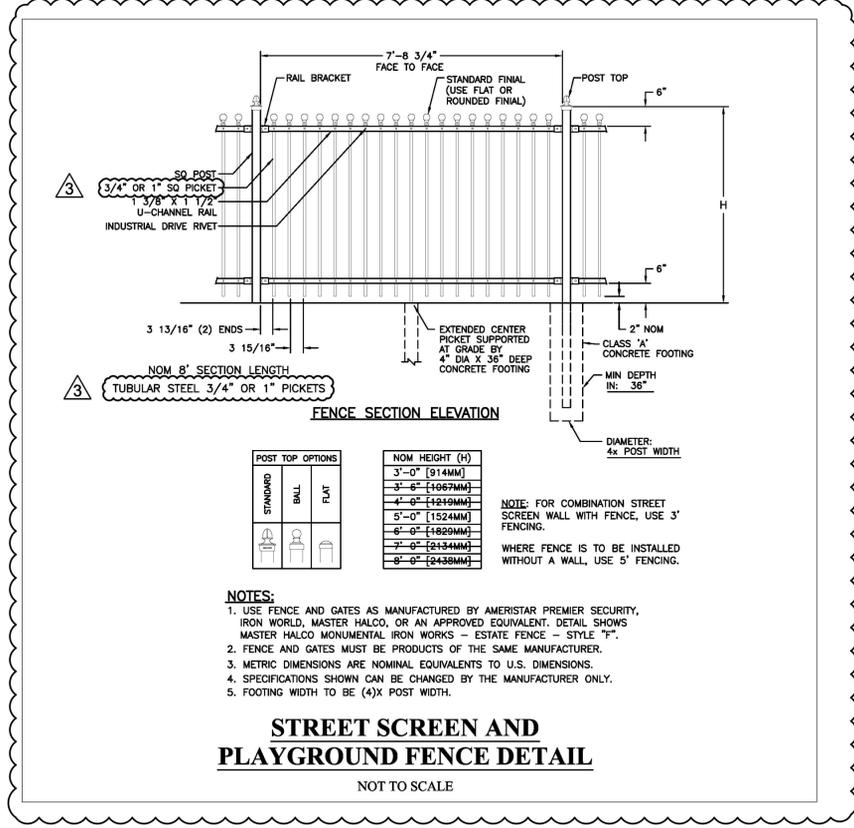
FILE NAME: CONDET.dwg

811
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<p>DELAWARE DEPARTMENT OF TRANSPORTATION</p>	PEDESTRIAN CONNECTION, TYPE 1 AND SECTIONS		APPROVED	SIGNATURE ON FILE	1/04/2019
	STANDARD NO.	C-2 (2018)	SHT.	1	OF
			RECOMMENDED	SIGNATURE ON FILE	12/20/2018

1/7/2019



SITE CONSTRUCTION DETAILS

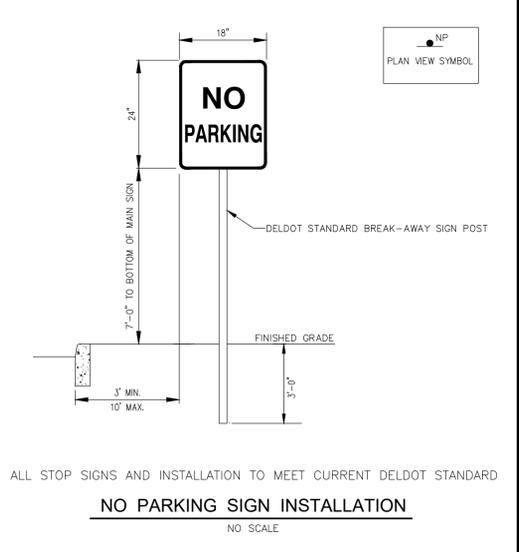
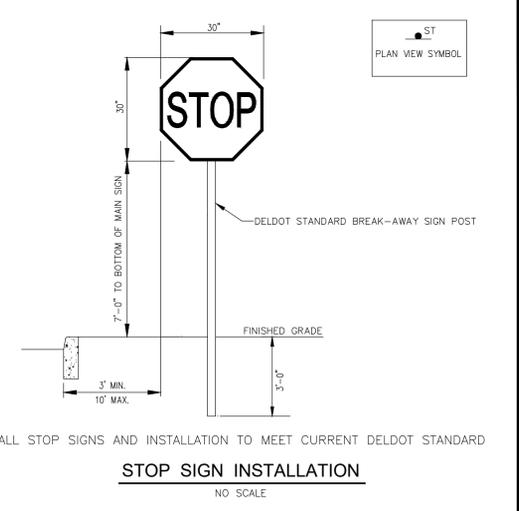
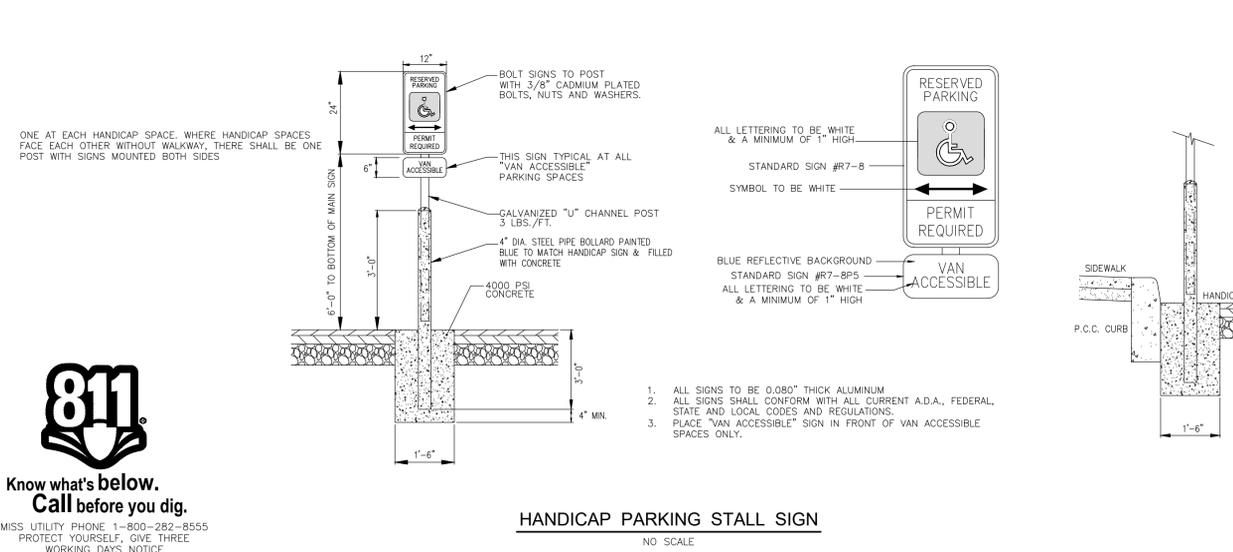
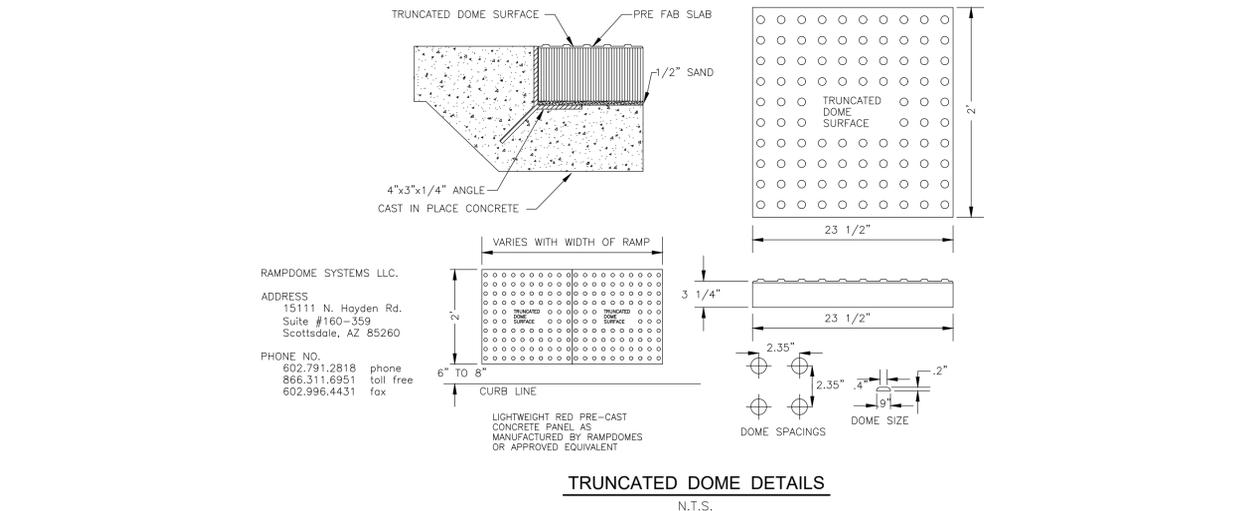
BRICK MILL

EARLY CHILDHOOD CENTER

MIDDLETOWN HUNDRED - NEW CASTLE COUNTY, DELAWARE

APPROXIMATE SCHOOL DISTRICT
118 S. SMITH ST., P.O. BOX 4010
QUESSA, DE 19720
302-398-6014

CREATED: 7-10-09
REVISIONS:
1. ADDENDUM #3



SECURE SITE DESIGN™ L.L.C.
(a VICTOR STANLEY, INC.® affiliate)

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410-286-3275 | FAX 410-478-9175
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TO STANDARD COLORS, 2 OPTIONAL METALLIC COLORS, CUSTOM COLORS (INCLUDING THE GAL. RANGE)
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OTHER FINISHES: GALVANIZED, STAINLESS STEEL (SPECIAL QUOTE NEEDED)

NOTES:

- DRAWINGS NOT TO SCALE. DO NOT SCALE DRAWINGS.
- ALL FABRICATED METAL COMPONENTS ARE STEEL SHOTBLASTED, ETCHED, PHOSPHATIZED, PREPARED, AND ELECTROSTATICALLY POWDER-COATED WITH T.I.G. POLYESTER POWDER COATINGS. PRODUCTS ARE FULLY CLEANED AND PREPARED, PREPARED AND COATED WHILE NOT TO FILL CRACKS AND BUILD COATING THICK. COATED PARTS ARE THEN FULLY CURED TO COATING MANUFACTURER'S SPECIFICATIONS. THE THICKNESS OF THE RESULTING FINISH AVERAGES 8-10 MILS (200-250 MICRONS).
- THIS SECURE SITE DESIGN, L.L.C. PRODUCT MUST BE PERMANENTLY AFFIXED IN THE GROUND. CONSULT YOUR LOCAL CODES FOR REGULATIONS.
- ALL SPECIFICATIONS ARE SUBJECT TO CHANGE. CONTACT MANUFACTURER FOR DETAILS.
- THIS PRODUCT IS SHIPPED FULLY ASSEMBLED.

BRWS-101
CYCLE SENTRY™ SERIES SIX PACK
SHOW: STANDARD IN-GROUND MOUNT

COMMISSION: C2891-1
FILE NAME: CONDET.dwg

DRAWN BY: MKB SCALE: NTS
DESIGN BY: MKB DATE: 05/01/2020
CHECK BY: TCW SHEET: 03-03 of 38

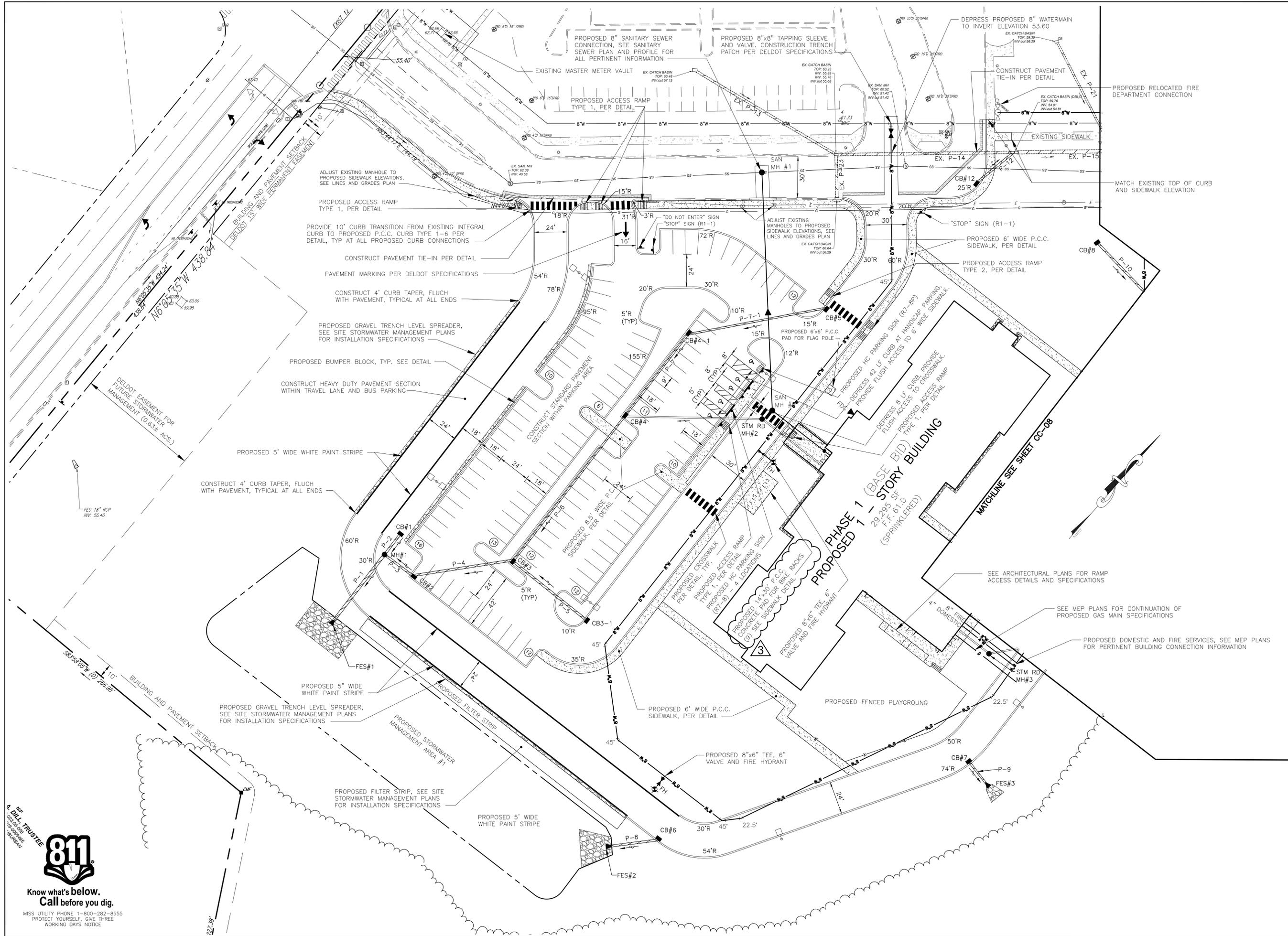
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811

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PHASE 1 SITE LAYOUT AND UTILITY PLAN BRICK MILL EARLY CHILDHOOD CENTER MIDDLETOWN HUNDRED - NEW CASTLE COUNTY, DELAWARE <small>APPOINTING: SCHOOL DISTRICT 110 S. ORESSA, DE 19730 302-376-4014</small>	TOWN OF MIDDLETOWN APPROVAL BLOCK
<small>200 CONTINENTAL DRIVE SUITE 400 NEWARK, DE 19713 PHONE (302) 322-8461 FAX (302) 322-8461 WWW.LANDMARK-SE.COM INFO @ LANDMARK-SE.COM</small>	<small>201 RESEARCH BLVD. SUITE 400 PHOENIX, AZ 85004 PHONE (602) 323-8461 FAX (602) 323-8461 INFO @ LANDMARK-SE.COM</small>
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DRAWN BY: MKB SCALE: 1"=30' DESIGN BY: MKB DATE: 05/01/2020 CHECK BY: TCW SHEET: CC-07 of 38	COMMISSION: C2891-1 CC-07 GRAPHIC SCALE 0 15 30 60 FILE NAME: LAYOUT.dwg

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I. GENERAL NARRATIVE

THE APPQUINMINK SCHOOL DISTRICT PROPOSED TO DEVELOP THIS 24.81+/- ACRE PARCEL LOCATED ON THE EAST OF THE INTERSECTION OF BRICK MILL ROAD AND DOVE RUN BOULEVARD IN THE TOWN OF MIDDLETOWN, APPQUINMINK HUNDRED, NEW CASTLE COUNTY, DELAWARE. THE PURPOSES OF THIS PLAN IS TO CONSTRUCT A NEW ONE-STORY EARLY CHILDHOOD CENTER WITH ALL ITS AMENITIES INCLUDING BUS AND PASSENGER VEHICLE PARKING, THE ENTRANCE WILL BE FROM THE EXISTING ACCESS TO THE BRICK MILL ELEMENTARY SCHOOL FROM BRICK MILL ROAD. THE TWO STORMWATER MANAGEMENT INFILTRATION BASINS PONDS WILL BE CONSTRUCTED USING THE MOST CURRENT STORMWATER BEST MANAGEMENT PRACTICES (SWMP).

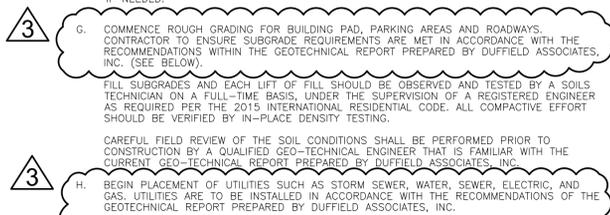
PROPOSED BUILDING CONSTRUCTION WILL BE COMPLETED IN 4 PHASES.

STORMWATER QUALITY AND QUANTITY MANAGEMENT IS PROPOSED TO BE PROVIDED BY THE CONSTRUCTION OF TWO ON-SITE SWMP FACILITIES. ALL FACILITIES HAVE BEEN DESIGNED IN ACCORDANCE WITH THE CURRENT DELAWARE SEDIMENT AND STORMWATER REGULATIONS AND NO WAIVERS ARE BEING REQUESTED.

SOILS ON THE ENTIRE SITE ARE MAPPED AS PRIMARILY REYBOLD SILT LOAM, 2 TO 5 PERCENT SLOPES, (reB) WITH A PORTION OF SASSAFRAS SANDY LOAM, (SoE) 15 TO 25 PERCENT SLOPES TO THE SOUTH AND EAST. BOTH SOILS ARE CLASSIFIED AS HYDROLOGICAL SOIL GROUP B.

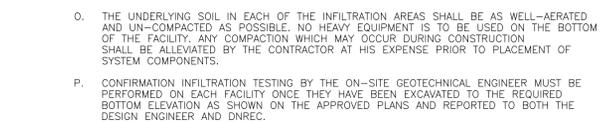
II. TEMPORARY SEDIMENTATION AND EROSION CONTROL MEASURES:

- A. SILT FENCE: A TEMPORARY BARRIER OF GEOTEXTILE FABRIC (FILTER CLOTH) USED TO INTERCEPT SEDIMENT LADEN RUNOFF FROM SMALL DRAINAGE AREAS OF DISTURBED SOIL. THIS STRUCTURE WILL FILTER RUNOFF CARRYING THE SEDIMENT, RETAIN THE SEDIMENT, AND ALLOW THE FILTERED RUNOFF TO PASS.
B. STABILIZED CONSTRUCTION ENTRANCE: THIS CRUSHED STONE MAT PREVENTS TRACKING OR FLOWING OF SEDIMENT OFF-SITE ONTO THE EXISTING ROADWAY.
C. STORM DRAIN INLET PROTECTION TYPE 1: THIS SEDIMENT CONTROL DEVICE CONSISTS OF A FRAMEWORK OF 2 x 4'S WITH SILT FENCE PLACED AROUND THE TOP OF A CATCH BASIN.
D. INLET PROTECTION TYPE 2: THIS SEDIMENT CONTROL DEVICE CONSISTS OF A GEOTEXTILE FABRIC POUCH INSERTED INTO A CATCH BASIN FOR THE PURPOSE OF CAPTURING SEDIMENT AS IT ENTERS THE CATCH BASIN.
E. SEDIMENT TRAP: AN EXCAVATION OR COMBINATION OF EXCAVATION AND EMBANKMENT AREA, APPROPRIATELY SIZED FOR SMALLER WATERSHEDS, WHICH TRAPS SEDIMENT LADEN RUNOFF AND PROVIDES TIME FOR SEDIMENT PARTICLES TO SETTLE OUT PRIOR TO DISCHARGE TO A RECEIVING OUTLET.
F. STABILIZATION MATTING: STRAW OR CURLED WOOD MATTING PLACED AFTER FINE GRADING AND SEEDING (TEMPORARY OR PERMANENT) ON ALL SLOPES 3:1 OR STEEPER AND ALL OPEN CHANNELS.
G. COMPOST FILTER LOG: THIS SEDIMENT CONTROL DEVICE CONSISTS OF A THREE-DIMENSIONAL TUBULAR FILTER SOCK THAT IS FILLED WITH COMPOST MEDIA TO INTERCEPT SEDIMENT LADEN RUNOFF FROM SMALL DRAINAGE AREAS OF DISTURBED SOILS WHILE ALLOWING THE FILTERED RUNOFF TO PASS THROUGH.
H. TEMPORARY BERM: CONSISTS OF MOUNDING EARTHEN MATERIALS OR A COMBINATION OF MOUNDING AND DITCHING EARTHEN MATERIALS, TO CONVEY SEDIMENT LADEN RUNOFF INTO A SEDIMENT TRAP OR SEDIMENT BASIN.



III. VEGETATIVE PRACTICES - TEMPORARY AND PERMANENT

- A. AREAS DESIGNATED TO BE TEMPORARILY STABILIZED SHALL BE SEEDDED WITH THE FOLLOWING SEED MIXTURE: (MIX #5 FROM DESCH TEMPORARY SEEDING SPEC.) ANNUAL RYEGRASS APPLIED AT THE RATE OF 125 LBS. PER ACRE.
B. AREAS DESIGNATED TO BE PERMANENTLY STABILIZED SHALL BE SEEDDED WITH THE FOLLOWING SEED MIXTURE: (MIX #7 FROM DESCH PERMANENT SEEDING SPEC.) OR THEY MAY RECEIVE SOD AS DIRECTED BY THE OWNER.
TALL FESCUE 80%
KENTUCKY BLUEGRASS BLEND 10%
PERENNIAL RYEGRASS 10%
(* BY WEIGHT TOTAL MIXTURE)
C. SEED APPLICATION RATE: 190 LBS. PER ACRE
D. FERTILIZATION: FERTILIZER SHALL BE THE FOLLOWING FORMULATION AND APPLIED AT THE FOLLOWING RATE:
10-10-10: 250 LBS PER ACRE (FORMULATION AND RATES MAY BE MODIFIED BASED ON SOIL TEST RECOMMENDATIONS IN GEOTECH REPORT).
E. STRAW MULCH SHALL BE APPLIED IN ACCORDANCE WITH DNREC STANDARD AND SPECIFICATIONS FOR MULCHING DE-ESC-3.4.5.
F. LIME-APPLY DOLOMITIC LIMESTONE AT 2 TONS PER ACRE.
G. SEEDBED PREPARATION:
IT IS IMPORTANT TO PREPARE A GOOD SEEDBED PRIOR TO ESTABLISHING VEGETATION. THE SEEDBED SHOULD BE WELL PREPARED, LOOSE TOPSOIL, FREE OF SIZEABLE ROCKS, DEBRIS, PETRIIFIED WOOD ETC.
H. APPLY SEED UNIFORMLY WITH A BROADCAST SEEDER, DRILL, CULTPACKER SEEDER OR HYDROSEEDER. ALL SEED WILL BE APPLIED AT THE RECOMMENDED RATE AND PLANTING DEPTH.
I. SEED THAT HAS BEEN BROADCAST SHOULD BE COVERED BY RAKING OR DRAGGING AND THEN LIGHTLY TAMPED INTO PLACE USING A ROLLER OR CULTPACKER. IF HYDROSEEDING IS USED AND THE SEED AND FERTILIZER IS MIXED, THEY WILL BE MIXED ON SITE AND THE SEEDING SHALL BE DONE IMMEDIATELY AND WITHOUT INTERRUPTION.
J. MULCHING TO BE DONE IN ACCORDANCE WITH DNREC STANDARD DETAIL.
K. CONTRACTOR IS RESPONSIBLE FOR WATERING SEEDED AREAS AS NECESSARY TO ACHIEVE THE REQUIRED VEGETATIVE STABILIZATION UNTIL THE SITE WORK IS COMPLETE AND ACCEPTED BY THE OWNER.
L. THE CONTRACTOR IS REQUIRED TO KEEP ALL SEED TICKETS AND PROVIDE TO CCR FOR SUBMITTAL TO DNREC FOR FINAL APPROVAL OF STORMWATER AS-BUILT PLANS.



- O. THE UNDERLYING SOIL IN EACH OF THE INFILTRATION AREAS SHALL BE AS WELL-AERATED AND UN-COMPACTED AS POSSIBLE. NO HEAVY EQUIPMENT IS TO BE USED ON THE BOTTOM OF THE FACILITY. ANY COMPACTION WHICH MAY OCCUR DURING CONSTRUCTION SHALL BE ALLEVIATED BY THE CONTRACTOR AT HIS EXPENSE PRIOR TO PLACEMENT OF SYSTEM COMPONENTS.
P. CONFIRMATION INFILTRATION TESTING BY THE ON-SITE GEOTECHNICAL ENGINEER MUST BE PERFORMED ON EACH FACILITY ONCE THEY HAVE BEEN EXCAVATED TO THE REQUIRED BOTTOM ELEVATION AS SHOWN ON THE APPROVED PLANS AND REPORTED TO BOTH THE DESIGN ENGINEER AND DNREC.
Q. IT IS IMPORTANT TO PREPARE GOOD SEEDBED PRIOR TO ESTABLISHING VEGETATION. THE SEEDBED SHOULD BE WELL PREPARED, LOOSE TOPSOIL, FREE OF SIZEABLE ROCKS, DEBRIS, PETRIIFIED WOOD ETC.
PRIORITY TO APPLYING PERMANENT SEEDING:
ALL PREVIOUS AREAS WITHIN DISTURBED AREAS SHALL BE DEEP-TILLED TO PROMOTE PASSIVE INFILTRATION OF STORMWATER RUNOFF.
THE SOIL SURFACE SHOULD NOT BE COMPACTED OR CRUSTED OVER WHEN SEED AND MULCH IS APPLIED.
H. APPLY SEED UNIFORMLY WITH A BROADCAST SEEDER, DRILL, CULTPACKER SEEDER OR HYDROSEEDER. ALL SEED WILL BE APPLIED AT THE RECOMMENDED RATE AND PLANTING DEPTH.
I. SEED THAT HAS BEEN BROADCAST SHOULD BE COVERED BY RAKING OR DRAGGING AND THEN LIGHTLY TAMPED INTO PLACE USING A ROLLER OR CULTPACKER. IF HYDROSEEDING IS USED AND THE SEED AND FERTILIZER IS MIXED, THEY WILL BE MIXED ON SITE AND THE SEEDING SHALL BE DONE IMMEDIATELY AND WITHOUT INTERRUPTION.
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K. CONTRACTOR IS RESPONSIBLE FOR WATERING SEEDED AREAS AS NECESSARY TO ACHIEVE THE REQUIRED VEGETATIVE STABILIZATION UNTIL THE SITE WORK IS COMPLETE AND ACCEPTED BY THE OWNER.
L. THE CONTRACTOR IS REQUIRED TO KEEP ALL SEED TICKETS AND PROVIDE TO CCR FOR SUBMITTAL TO DNREC FOR FINAL APPROVAL OF STORMWATER AS-BUILT PLANS.
M. THE SOIL SURFACE SHOULD NOT BE COMPACTED OR CRUSTED OVER WHEN SEED AND MULCH IS APPLIED.
S. EROSION AND SEDIMENT CONTROL DEVICES TO BE REMOVED ONLY AFTER WORK IN AN AREA HAS BEEN COMPLETED AND STABILIZED, WITH WRITTEN APPROVAL FROM THE AGENCY CONSTRUCTION SITE REVIEWER.
T. INSTALL ALL PLANTINGS ETC. AS SHOWN ON THE APPROVED RECORD LANDSCAPE PLAN. WHEN ALL PLANTINGS ARE INSTALLED, SCHEDULE THE RECORD LANDSCAPING INSPECTION WITH LANDSCAPE ARCHITECT FOR THIS PROJECT.
U. PRIOR TO NOTIFYING DNREC OF COMPLETION, A STORMWATER MANAGEMENT FACILITY AS-BUILT SUBMISSION PACKAGE MUST BE SUBMITTED TO DNREC FOR APPROVAL OF ALL FACILITIES AND MUST BE APPROVED PRIOR TO ISSUANCE OF A PERMANENT CERTIFICATE OF OCCUPANCY. VEGETATIVE STABILIZATION REQUIREMENTS MUST BE MET IN ORDER TO RECEIVE A PERMANENT CERTIFICATE OF OCCUPANCY. THIS INCLUDES 100% STABILIZATION OF ALL AREAS WITHIN A STORMWATER MANAGEMENT AREA AND 70% STABILIZATION ON ALL OTHER AREAS.
V. A RECORD PLAN COMPLIANCE INSPECTION BY THE TOWN OF MIDDLETOWN MUST BE COMPLETED AND PASSED PRIOR TO RECEIVING A CERTIFICATE OF OCCUPANCY.
W. THE TERMINATION OF THE CONSTRUCTION GENERAL PERMIT WILL REQUIRE SUBMISSION AND ACCEPTANCE OF THE POST CONSTRUCTION VERIFICATION DOCUMENTS, INCLUDING FINAL STABILIZATION THROUGHOUT THE SITE, ALL ELEMENTS OF THE SEDIMENT AND STORMWATER MANAGEMENT PLAN IMPLEMENTED, AND ACCEPTANCE OF THE FINAL OPERATION AND MAINTENANCE PLAN.

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IV. SEQUENCE OF CONSTRUCTION

- A. SCHEDULE AND ATTEND A PRE-CONSTRUCTION MEETING WITH THE DELAWARE DEPARTMENT OF NATURAL RESOURCES AND ENVIRONMENTAL CONTROL (DNREC), THE DEVELOPER, THE CCR, THE SITE CONTRACTOR AND THE CIVIL ENGINEER. A CERTIFIED CONSTRUCTION REVIEWER (CCR) WILL BE REQUIRED. NOTIFY DNREC AND CCR AT LEAST 48 HOURS PRIOR TO THE START OF ANY CONSTRUCTION ITEM THAT WILL REQUIRE THEIR INSPECTION.
B. THE DNREC SEDIMENT AND STORMWATER PROGRAM MUST BE NOTIFIED IN WRITING FIVE (5) DAYS PRIOR TO COMMENCING WITH CONSTRUCTION. FAILURE TO DO SO CONSTITUTES A VIOLATION OF THE APPROVED SEDIMENT AND STORMWATER MANAGEMENT PLAN.
C. INSTALL PERIMETER CONTROLS AS SHOWN ON THE PRE-CONSTRUCTION SITE STORMWATER MANAGEMENT PLAN. ONLY THOSE AREAS WHERE THESE CONTROLS ARE INITIALLY INSTALLED SHALL BE DISTURBED.
THE CONTROL MEASURES ARE AS FOLLOWS:
1. INSTALL STABILIZED CONSTRUCTION ENTRANCE.
2. INSTALL CHAIN LINK FENCE.
3. INSTALL SILT FENCE AS SHOWN.
4. INSTALL INLET PROTECTIONS, AS NEEDED.
5. STRIP AREA FOR STOCKPILING OF EXCAVATED MATERIALS.
6. STRIP AREA FOR LAYDOWN, TRAILERS, AND PARKING.
7. INSTALL TEMPORARY TRAILERS AND PARKING.
8. STRIP AND STOCKPILE TOPSOIL AND INSTALL SILT FENCE.
9. CONSTRUCT SEDIMENT TRAPS AS SHOWN AND PER DETAIL. CONSTRUCT ALL DIVERSIONS ENSURING ALL SEDIMENT WILL BE DIRECTED TO THE TRAPS AS REQUIRED.
D. ALL PERIMETER CONTROLS MUST BE INSTALLED, STABILIZED, INSPECTED BY DNREC PRIOR TO BULK GRADING, BULK EROSION, OR ANY UTILITY INSTALLATION ON NON-RESIDENTIAL PROJECTS. PRIOR TO THIS PRE-CONSTRUCTION SITE INSPECTION, NO DISTURBANCE MAY OCCUR ON-SITE OTHER THAN THOSE AREAS NECESSARY TO ESTABLISH THE PERIMETER EROSION AND SEDIMENT CONTROLS. INSTALL THE PERIMETER CONTROLS PURSUANT TO THIS PLAN. ALL EARTHEN PERIMETER SEDIMENT CONTROLS, INCLUDING SOIL STOCKPILES, SHALL BE VEGETATIVELY STABILIZED.
E. INSTALL POLLUTION PREVENTION PRACTICES, INCLUDING BUT NOT LIMITED TO:
1. CONCRETE WASHOUT AREA
2. SPILL CONTROL
3. CONCRETE MIXING OPERATION
F. PERIODICALLY MAINTAIN THE PERIMETER CONTROL MEASURES, AS NEEDED. THE CONTRACTOR SHALL AT ALL TIMES PROTECT AGAINST SEDIMENT OR DEBRIS LADEN RUNOFF OR WIND FROM LEAVING THE SITE. PERIMETER CONTROL ARE TO BE CHECKED DAILY AND ADJUSTED AND/OR REPAIRED AS REQUIRED TO FULLY CONTAIN AND CONTROL SEDIMENTATION ON THE SITE. ACCUMULATED SEDIMENT SHALL BE REMOVED WHEN WHEN IT HAS REACHED HALF OF THE EFFECTIVE CAPACITY OF THE CONTROL. IN ADDITION, THE CONTRACTOR MAY NEED TO ADJUST OR REPAIR MEASURES IN TIMES OF ADVERSE WEATHER CONDITIONS, OR AS DIRECTED BY THE DELEGATED AGENCY. THIS INCLUDES PUMPING OF ALL SEDIMENT TRAPS IF NEEDED.
G. COMMENCE ROUGH GRADING FOR BUILDING PAD, PARKING AREAS AND ROADWAYS. CONTRACTOR TO ENSURE SUBGRADE REQUIREMENTS ARE MET IN ACCORDANCE WITH THE RECOMMENDATIONS WITHIN THE GEOTECHNICAL REPORT PREPARED BY DUFFIELD ASSOCIATES, INC. (SEE BELOW).
FILL SUBGRADES AND EACH LIFT OF FILL SHOULD BE OBSERVED AND TESTED BY A SOILS TECHNICIAN ON A FULL-TIME BASIS, UNDER THE SUPERVISION OF A REGISTERED ENGINEER AS REQUIRED PER THE 2015 INTERNATIONAL RESIDENTIAL CODE. ALL COMPACTIVE EFFORT SHOULD BE VERIFIED BY IN-PLACE DENSITY TESTING.
CAREFUL FIELD REVIEW OF THE SOIL CONDITIONS SHALL BE PERFORMED PRIOR TO CONSTRUCTION BY A QUALIFIED GEO-TECHNICAL ENGINEER THAT IS FAMILIAR WITH THE CURRENT GEO-TECHNICAL REPORT PREPARED BY DUFFIELD ASSOCIATES, INC.
H. BEGIN PLACEMENT OF UTILITIES SUCH AS STORM SEWER, WATER, SEWER, ELECTRIC, AND GAS. UTILITIES ARE TO BE INSTALLED IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE GEOTECHNICAL REPORT PREPARED BY DUFFIELD ASSOCIATES, INC.
I. INSTALL CURB AND PAVEMENT BASE COURSE.
J. INSTALL INLET PROTECTION ON ALL INLETS THAT HAVE BEEN INSTALLED DURING THE COURSE OF A DAY PRIOR TO THE END OF THE DAY OR AN ANTICIPATED RAIN EVENT.
K. ONCE STORM DRAINAGE STRUCTURES ARE ON-LINE, PLACE REMAINING CURBING AND PAVEMENT BASE COURSE.
L. PERIODICALLY MAINTAIN THE PERIMETER CONTROL MEASURES, AS NEEDED. THE CONTRACTOR SHALL AT ALL TIMES PROTECT AGAINST SEDIMENT OR DEBRIS LADEN RUNOFF OR WIND FROM LEAVING THE SITE. PERIMETER CONTROLS ARE TO BE CHECKED DAILY AND ADJUSTED AND/OR REPAIRED AS REQUIRED TO FULLY CONTAIN AND CONTROL SEDIMENTATION ON THE SITE. ACCUMULATED SEDIMENT SHALL BE REMOVED WHEN IT HAS REACHED HALF OF THE EFFECTIVE CAPACITY OF THE CONTROL. IN ADDITION, THE CONTRACTOR MAY NEED TO ADJUST OR REPAIR MEASURES IN TIMES OF ADVERSE WEATHER CONDITIONS, OR AS DIRECTED BY THE DELEGATED AGENCY. THIS INCLUDES PUMPING OF ALL SEDIMENT TRAPS IF NEEDED.
A WATER TRUCK SHALL BE AVAILABLE AT ALL TIMES FOR DUST CONTROL AND FOR ASSISTING WITH GERMINATION OF VEGETATIVE STABILIZATION IF ON-SITE WATER IS NOT AVAILABLE.
WITH THE APPROVAL OF THE DNREC SITE INSPECTOR, CONVERT THE SEDIMENT TRAPS INTO STORMWATER FACILITIES. CONTACT CCR AND SURVEYOR AT LEAST 3 WORKING DAYS PRIOR TO CONVERSION, AS THEY NEED TO BE PRESENT.
N. NOTIFY THE PERSON RESPONSIBLE FOR STORMWATER SYSTEM CONSTRUCTION REVIEW AT LEAST 3 DAYS PRIOR TO THE START OF THE STORMWATER SYSTEM; STORMWATER FACILITIES MUST BE REVIEWED THROUGHOUT THEIR CONSTRUCTION.
NOTE: AN AS-BUILT SURVEY IS REQUIRED FOR EACH STORMWATER FACILITY. THERE ARE COMPONENTS OF THE SYSTEM THAT MUST BE SURVEYED PRIOR TO AND DURING ITS CONSTRUCTION.
NOTE: STORMWATER FACILITIES ARE TO REMAIN AS SEDIMENT TRAPS UNTIL THE AREA DRAINING TO THEM HAS BEEN STABILIZED. THEN THEY CAN BE CONVERTED TO PERMANENT STORMWATER FACILITIES.
O. THE UNDERLYING SOIL IN EACH OF THE INFILTRATION AREAS SHALL BE AS WELL-AERATED AND UN-COMPACTED AS POSSIBLE. NO HEAVY EQUIPMENT IS TO BE USED ON THE BOTTOM OF THE FACILITY. ANY COMPACTION WHICH MAY OCCUR DURING CONSTRUCTION SHALL BE ALLEVIATED BY THE CONTRACTOR AT HIS EXPENSE PRIOR TO PLACEMENT OF SYSTEM COMPONENTS.
P. CONFIRMATION INFILTRATION TESTING BY THE ON-SITE GEOTECHNICAL ENGINEER MUST BE PERFORMED ON EACH FACILITY ONCE THEY HAVE BEEN EXCAVATED TO THE REQUIRED BOTTOM ELEVATION AS SHOWN ON THE APPROVED PLANS AND REPORTED TO BOTH THE DESIGN ENGINEER AND DNREC.
Q. IT IS IMPORTANT TO PREPARE GOOD SEEDBED PRIOR TO ESTABLISHING VEGETATION. THE SEEDBED SHOULD BE WELL PREPARED, LOOSE TOPSOIL, FREE OF SIZEABLE ROCKS, DEBRIS, PETRIIFIED WOOD ETC.
PRIORITY TO APPLYING PERMANENT SEEDING:
ALL PREVIOUS AREAS WITHIN DISTURBED AREAS SHALL BE DEEP-TILLED TO PROMOTE PASSIVE INFILTRATION OF STORMWATER RUNOFF.
THE SOIL SURFACE SHOULD NOT BE COMPACTED OR CRUSTED OVER WHEN SEED AND MULCH IS APPLIED.
S. EROSION AND SEDIMENT CONTROL DEVICES TO BE REMOVED ONLY AFTER WORK IN AN AREA HAS BEEN COMPLETED AND STABILIZED, WITH WRITTEN APPROVAL FROM THE AGENCY CONSTRUCTION SITE REVIEWER.
T. INSTALL ALL PLANTINGS ETC. AS SHOWN ON THE APPROVED RECORD LANDSCAPE PLAN. WHEN ALL PLANTINGS ARE INSTALLED, SCHEDULE THE RECORD LANDSCAPING INSPECTION WITH LANDSCAPE ARCHITECT FOR THIS PROJECT.
U. PRIOR TO NOTIFYING DNREC OF COMPLETION, A STORMWATER MANAGEMENT FACILITY AS-BUILT SUBMISSION PACKAGE MUST BE SUBMITTED TO DNREC FOR APPROVAL OF ALL FACILITIES AND MUST BE APPROVED PRIOR TO ISSUANCE OF A PERMANENT CERTIFICATE OF OCCUPANCY. VEGETATIVE STABILIZATION REQUIREMENTS MUST BE MET IN ORDER TO RECEIVE A PERMANENT CERTIFICATE OF OCCUPANCY. THIS INCLUDES 100% STABILIZATION OF ALL AREAS WITHIN A STORMWATER MANAGEMENT AREA AND 70% STABILIZATION ON ALL OTHER AREAS.
V. A RECORD PLAN COMPLIANCE INSPECTION BY THE TOWN OF MIDDLETOWN MUST BE COMPLETED AND PASSED PRIOR TO RECEIVING A CERTIFICATE OF OCCUPANCY.
W. THE TERMINATION OF THE CONSTRUCTION GENERAL PERMIT WILL REQUIRE SUBMISSION AND ACCEPTANCE OF THE POST CONSTRUCTION VERIFICATION DOCUMENTS, INCLUDING FINAL STABILIZATION THROUGHOUT THE SITE, ALL ELEMENTS OF THE SEDIMENT AND STORMWATER MANAGEMENT PLAN IMPLEMENTED, AND ACCEPTANCE OF THE FINAL OPERATION AND MAINTENANCE PLAN.

VIII. GENERAL MAINTENANCE REQUIREMENTS

MAINTENANCE OF THE POST-CONSTRUCTION STORMWATER MANAGEMENT FACILITIES, INCLUDING BUT NOT LIMITED TO, OUTLET STRUCTURES, EMBANKMENTS, PLANTINGS, AND GENERAL APPEARANCE WILL BE THE RESPONSIBILITY OF THE PROPERTY OWNER.
SEE POST-CONSTRUCTION SITE STORMWATER MANAGEMENT FACILITY PLANS FOR SPECIFIC OPERATION & MAINTENANCE REQUIREMENTS FOR EACH FACILITY.

SUPPLEMENTAL SEDIMENT AND STORMWATER NOTES

- 1. IT WILL BE THE LANDOWNER'S RESPONSIBILITY FOR PERPETUAL MAINTENANCE OF ALL STORMWATER MANAGEMENT FACILITIES.
2. IT IS THE CONTRACTOR'S RESPONSIBILITY TO REPAIR AND STABILIZE ALL EROSION AND SEDIMENT CONTROLS AND STORMWATER PRACTICES DURING CONSTRUCTION, INCLUDING THOSE THAT ARE DISTURBED BY UTILITY COMPANIES.
3. ALL ROCK/STONE, WITH THE EXCEPTION OF CHECK DAMS, MUST BE UNDERLINED WITH A GEOTEXTILE FABRIC.
4. IN THE EVENT EARTHWORK OPERATIONS ARE HALTED FOR THE WINTER MONTHS, BEFORE FINAL GRADING AND SEEDING OF ALL DISTURBED AREAS ARE COMPLETED, THOSE AREAS SHALL BE EITHER SEEDDED OR STABILIZED WITH MULCH AND TACKED WITH A CHEMICAL ADHESIVE.
5. THE CONTRACTOR SHALL USE ALL MEANS NECESSARY TO CONTROL DUST ON AND NEAR THE WORK AREA IF SUCH DUST IS CAUSED BY THE CONTRACTOR'S OPERATIONS DURING THE WORK, OR IF RESULTING FROM THE CONDITIONS IN WHICH THE CONTRACTOR LEAVES THE SITE. IF DUST BECOMES A PROBLEM, SPRAY DISTURBED AREAS WITH WATER HOURLY OR APPLY CALCIUM CHLORIDE.
6. THE CONTRACTOR SHALL CONTROL TRACKING OF SEDIMENT OFF-SITE ONTO PUBLIC PAVED SURFACES. SHOULD TRACKING OCCUR, THE CONTRACTOR SHALL SWEEP OR REMOVE THE SEDIMENT BY OTHER MEANS SO AS TO PREVENT SEDIMENTATION OF OFF-SITE DRAINAGE SYSTEMS OR WATER BODIES.
7. ALL SITE IMPROVEMENTS INCLUDING LANDSCAPING, PERMANENT SITE STABILIZATION AND PERMANENT STORMWATER MANAGEMENT FACILITIES SHALL BE IN PLACE AND APPROVED PRIOR TO ISSUANCE OF CERTIFICATE OF OCCUPANCY.
8. THERE IS AN ESTIMATED 1,000 CUBIC YARDS OF SPOIL MATERIAL GENERATED FROM THIS SITE.

SEDIMENT AND STORMWATER CONSTRUCTION NOTES

- 1. THE DNREC SEDIMENT AND STORMWATER PROGRAM SHALL BE NOTIFIED IN WRITING 5 DAYS PRIOR TO COMMENCING WITH CONSTRUCTION. FAILURE TO DO SO CONSTITUTES A VIOLATION OF THE APPROVED SEDIMENT AND STORMWATER MANAGEMENT PLAN.
2. REVIEW AND/OR APPROVAL OF THE SEDIMENT AND STORMWATER MANAGEMENT PLAN SHALL NOT RELIEVE THE CONTRACTOR FROM HIS OR HER RESPONSIBILITIES FOR COMPLIANCE WITH THE REQUIREMENTS OF THE DELAWARE SEDIMENT AND STORMWATER REGULATIONS, NOR SHALL IT RELIEVE THE CONTRACTOR FROM ERRORS OR OMISSIONS IN THE APPROVED PLAN.
3. IF THE APPROVED PLAN NEEDS TO BE MODIFIED, ADDITIONAL SEDIMENT AND STORMWATER CONTROL MEASURES MAY BE REQUIRED AS DEEMED NECESSARY BY DNREC OR THE DELEGATED AGENCY.
4. FOLLOWING SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED FOR ALL PERIMETER SEDIMENT CONTROLS, SOIL STOCKPILES, AND ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE WITHIN 14 CALENDAR DAYS UNLESS MORE RESTRICTIVE FEDERAL REQUIREMENTS APPLY.
5. ALL EROSION AND SEDIMENT CONTROL PRACTICES SHALL COMPLY WITH THE DELAWARE EROSION AND SEDIMENT CONTROL HANDBOOK, LATEST EDITION.
6. AT ANY TIME A DEWATERING OPERATION IS USED, IT SHALL BE PREVIOUSLY APPROVED BY THE AGENCY CONSTRUCTION SITE REVIEWER FOR A NON-EROSIVE POINT OF DISCHARGE, AND A DEWATERING PERMIT SHOULD BE APPROVED BY THE DNREC WELL PERMITTING BRANCH.
7. APPROVED PLANS REMAIN VALID FOR 5 YEARS FROM THE DATE OF APPROVAL.
8. POST CONSTRUCTION VERIFICATION DOCUMENTS SHALL BE SUBMITTED TO THE DEPARTMENT OR DELEGATED AGENCY WITHIN 60-DAYS OF STORMWATER MANAGEMENT FACILITY COMPLETION.
9. APPROVAL OF A SEDIMENT AND STORMWATER MANAGEMENT PLAN DOES NOT GRANT OR IMPLY A RIGHT TO DISCHARGE STORMWATER RUNOFF TO THE OWNER/DEVELOPER IS RESPONSIBLE FOR ACQUIRING ANY AND ALL AGREEMENTS, EASEMENTS, ETC., NECESSARY TO COMPLY WITH STATE DRAINAGE AND OTHER APPLICABLE LAWS.
10. THE NOTICE OF INTENT FOR STORM WATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITY UNDER A NPDES GENERAL PERMIT FOR THIS PROJECT IS # (TO BE FILLED IN ONCE RECEIVED). THE PERMITTEE OF RECORD SHALL NOT BE RELIEVED OF THEIR RESPONSIBILITIES UNTIL A NOTICE OF TERMINATION HAS BEEN PROCESSED BY THE DEPARTMENT.
11. THE OWNER SHALL BE FAMILIAR WITH AND COMPLY WITH ALL ASPECTS OF THE NPDES CONSTRUCTION GENERAL PERMIT.
12. THE CONTRACTOR SHALL AT ALL TIMES PROTECT AGAINST SEDIMENT OR DEBRIS LADEN RUNOFF OR WIND FROM LEAVING THE SITE. PERIMETER CONTROLS SHALL BE CHECKED DAILY AND ADJUSTED OR REPAIRED TO FULLY CONTAIN AND CONTROL SEDIMENT FROM LEAVING THE SITE. ACCUMULATED SEDIMENT SHALL BE REMOVED WHEN IT HAS REACHED HALF OF THE EFFECTIVE CAPACITY OF THE CONTROL. IN ADDITION, THE CONTRACTOR MAY NEED TO ADJUST OR ALTER MEASURES IN TIMES OF ADVERSE WEATHER CONDITIONS, OR AS DIRECTED BY THE AGENCY CONSTRUCTION SITE REVIEWER.
13. BEFORE ANY EARTHWORK OR EXCAVATION TAKES PLACE, THE CONTRACTOR SHOULD CALL MISS UTILITY AT 811 OR 1-800-282-8555 AT LEAST 48 HOURS PRIOR TO CONSTRUCTION, TO HAVE ALL EXISTING UTILITIES MARKED ON-SITE.
14. BEST AVAILABLE TECHNOLOGY (BAT) SHALL BE EMPLOYED TO MANAGE TURBID DISCHARGES IN ACCORDANCE WITH REQUIREMENTS OF DEL. C. H. 60 AND THE CURRENT DELAWARE CONSTRUCTION GENERAL PERMIT (CGP).
15. DOCUMENTATION OF SOIL TESTING AND MATERIALS USED FOR TEMPORARY OR PERMANENT STABILIZATION INCLUDING BUT NOT LIMITED TO SOIL TEST RESULTS, SEED TAGS, SOIL AMENDMENT TAGS, ETC. SHALL BE PROVIDED TO THE DEPARTMENT OR DELEGATED AGENCY TO VERIFY THAT THE PERMANENT OR TEMPORARY STABILIZATION HAS BEEN COMPLETED IN ACCORDANCE WITH THE APPROVED PLAN.
16. THE DEPARTMENT OR DELEGATED AGENCY MAY REQUIRE ADDITIONAL SOIL TESTING AND REAPPLICATION OF PERMANENT OR TEMPORARY STABILIZATION IN ACCORDANCE WITH THE SPECIFICATIONS IN THE DELAWARE EROSION AND SEDIMENT CONTROL HANDBOOK OR ALTERNATIVE MEASURES THAT PROVIDE FUNCTIONAL EQUIVALENCY.

Standard Detail & Specifications Mulching
1. Materials and Amounts
a. Straw-Straw should be unrotted small grain straw applied at the rate of 1-1/2 to 2 tons per acre, or 70 to 90 pounds (two bales) per 1,000 square feet. Mulch materials shall be relatively free of weeds and shall be free of noxious weeds such as, thistles, Johnsongrass, and quackgrass. Spread mulch uniformly by hand or mechanically. For uniform distribution of hand spread mulch, divide area into approximately 1,000 square feet sections and place 70-90 pounds (two bales) of mulch in each section.
b. Wood chips - Apply at the rate of approximately 6 tons per acre or 275 pounds per 1,000 square feet when available and when feasible. These are particularly well suited for utility and road rights-of-way. If wood chips are used, increase the application rate of nitrogen fertilizer by 20 pounds of N per acre (200 pounds of 10-10-10 or 66 pounds of 30-0-0 per acre).
c. Hydraulically applied mulch - The following conditions apply to hydraulically applied mulch:
i. Definitions:
a. Wood fiber mulch shall consist of specially prepared wood that has been processed to a uniform slat, is packaged for sale as a hydraulic mulch for use with hydraulic seeding equipment, and consists of a minimum of 70% virgin or recycled wood fiber combined with 30% paper fiber and additives.
b. Blended fiber mulch shall consist of any hydraulic mulch that contains greater than 30% paper fiber. The paper component must consist of specially prepared paper that has been processed to a uniform fibrous state and is packaged for sale as a hydraulic mulch for use with hydraulic seeding equipment.
c. A bonded fiber matrix (BFM) consists of long strand, specially prepared wood fibers that have been processed to a uniform slat held together by a water resistant bonding agent. BFM shall contain no paper (cellulose) mulch but may contain small percentages of synthetic fibers to enhance performance.
d. Refer to Figure 3.4.5a for conditions and limitations of use for each of the above categories of hydraulic mulch.
ii. All components of the hydraulically applied mulches shall be pre-packaged by the manufacturer to assure material performance. Field mixing of the mulch components is acceptable, but must be done per manufacturer recommendations to ensure the proper results.
iii. Hydraulic mulches shall be applied with a viable seed and at manufacturer's recommended rates. Increased rates may be necessary based on site conditions.
iv. Hydraulically applied mulches and additives shall be mixed according to manufacturers recommendations.
v. Materials within this category shall only be used when hydraulically applied mulch has been specified for use on the approved Sediment and Stormwater Plan, or supplemental approval from the plan approval agency has been obtained in writing for a specific area.
Source: Delaware ESC Handbook & Filtrex International
Symbol:
Detail No. DE-ESC-3.4.5 Sheet 1 of 3
Effective February 2019

Standard Detail & Specifications Mulching
v. Application:
a. Apply product to geotechnically stable slopes that have been designed and constructed to soil runoff away from the face of the slope.
b. Do not apply to saturated soils, or if precipitation is anticipated within 24-48 hours.
c. During the spring (March 1st to May 31st) and fall (September 1st to November 30th) seasons, hydraulic mulches may be applied in a one-step process where all components are mixed together in single-tank loads. It is recommended that the product be applied from opposing directions to achieve optimum soil coverage.
d. During the summer (June 1st to August 31st) and winter (December 1st to February 28th) seasons, the following two-step process is required:
Step One - Mix and apply seed and soil amendments with a small amount of mulch for visual mulching.
Step Two - Mix and apply mulch at manufacturer's recommended rates over freshly seeded surfaces. Apply from opposing directions to achieve optimum soil coverage.
e. Minimum curing temperature is 40°F (4°C). The best results and more rapid curing are achieved at temperatures exceeding 60°F (15°C). Curing times may be accelerated in high temperatures, low humidity conditions on dry soils.
vi. Recommended application rates are for informational purposes only. Conformance with this standard and specification shall be performance-based and requires 100% soil coverage. Any areas with bare soil showing shall be top dressed until full coverage is achieved.
d. Compost Blanket (CB) - Loosely applied with a pneumatic blower so that a 1" compost blanket uniformly covers the soil with 100% coverage. This application can be used with seed to promote germination by applying the approved seed mix directly into the loosely bound compost. The compost blanket performs best on slopes less than 2:1 and requires no mulch anchoring.
2. Anchoring mulch - Mulch must be anchored immediately to minimize loss by wind or water. This may be done by one of the following methods, depending upon size of area, erosion hazard, and cost:
a. Crimping - A crimper is a tractor draw implement designed to punch and anchor mulch into the top two (2) inches of soil. This practice affords maximum erosion control but is limited to flatter slopes where equipment can operate safely. On sloping land, crimping should be done on the contour whenever possible.
b. Tracking - Tracking is the process of cutting mulch (usually straw) into the soil using a bulldozer or other equipment that runs on doaded tracks. Tracking is used primarily on slopes 3:1 or steeper and should be done up and down the slope with clear marks running across the slope.
c. Liquid mulch binders - Applications of liquid mulch binders should be heavier at edges, in valleys, and at crests of banks and other areas where the mulch will be moved by wind or water. All other areas should have a uniform application of binder. The use of synthetic binders is the preferred method of mulch binding and should be applied at the rates recommended by the manufacturer.
d. Paper fiber - The fiber binder shall be applied at a dry weight of 750 lbs/ac. The wood cellulose fiber shall be mixed with water, and the mixture shall contain a maximum of 50 lbs. of wood cellulose fiber per 100 gallons.
e. Netting - Synthetic or organic nettings may be used to secure straw mulch. Install and secure according to the manufacturers recommendations.
Source: Delaware ESC Handbook & Filtrex International
Symbol:
Detail No. DE-ESC-3.4.5 Sheet 2 of 3
Effective February 2019

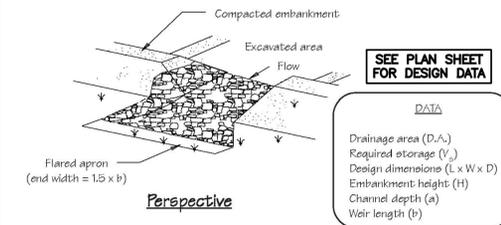
Standard Detail & Specifications Mulching
MULCHING MATERIAL SELECTION GUIDE
This table provides a selection guide for mulching materials based on soil type, slope, and application method. It includes columns for material type, application rate, and suitability for various conditions.
Source: Delaware ESC Handbook & Filtrex International
Symbol:
Detail No. DE-ESC-3.4.5 Sheet 3 of 3
Effective February 2019

Standard Detail & Specifications Geotextile Dewatering Bag
Plan view showing a rectangular bag with dimensions Length and Width. It features High strength strapping at the corners and a Pump discharge hose at one end.
Profile view showing the bag's construction with Aggregate underlayment if placed on soil surface.
Source: Adapted from ACF Products, Inc.
Symbol: GB
Detail No. DE-ESC-3.2.1.2 Sheet 1 of 2
Effective February 2019

Standard Detail & Specifications Geotextile Dewatering Bag
Construction Notes:
1. The dewatering bag should be placed so the incoming water flows into and through the bag, and then flow off the site without creating more erosion. The neck should be tied off tightly to stop the water from flowing out of the bag without going through the walls. The dewatering bag should be placed on a gravel bed to allow water to flow in all directions.
2. The dewatering bag is considered full and should be disposed when it is impractical for the bag to filter the sediment out at a reasonable flow rate. At this point, it should be replaced with a new bag.
3. Disposal may be accomplished as directed by the construction reviewer. If the site allows, the bag may be buried on site and sealed, visible fabric removed and seeded or removed from site to a proper disposal area.
Materials:
1. The geotextile fabric shall be a Type GD-IV.
2. The dewatering bag shall be sewn with a double needle machine using high strength thread. All structural seams will be sewn with high strength, double stitched 1" Type Seam strength test will have the following minimum average pull values:
Table with columns: Type, TEST METHOD, TEST RESULT.
Type: Heavy duty
TEST METHOD: ASTM D-4684
TEST RESULT: 100 lb./in.
3. The dewatering bag shall have an opening large enough to accommodate a four (4) inch discharge hose with attached strap to tie the hose to prevent the pumped water from escaping from the bag without being filtered.
Source: Adapted from ACF Products, Inc.
Symbol: GB
Detail No. DE-ESC-3.2.1.2 Sheet 2 of 2
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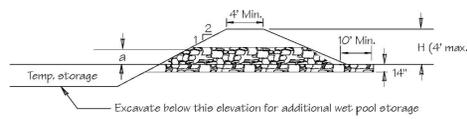
SEDIMENT AND STORMWATER MANAGEMENT PLANS CONSTRUCTION SITE DETAILS AND NOTES
BRICK MILL EARLY CHILDHOOD CENTER MIDDLETOWN HUNDRED - NEW CASTLE COUNTY, DELAWARE
APPOQUINMINK SCHOOL DISTRICT
118 S. SIXTH ST., P.O. BOX 4010 MIDDLETOWN, DE 19709
(302) 376-4014
NEW CASTLE, DE (302) 323-9577
DOVER, DE (302) 734-6597
HARRISBURG, DE (410) 839-2144
Landmark Science & Engineering
100 WEST COMMONS BOULEVARD, SUITE 301 NEW CASTLE, DELAWARE 19720
PHONE: (302) 739-0461
FAX: (302) 739-0461
WWW.LANDMARK-SEC.COM
INFO @ LANDMARK-SEC.COM • WWW.LANDMARK-SEC.COM
DRAWING NO. CE-06
SHEET NO. CE-06 of 19
DATE: 05/01/2020
LAST CHECKED BY: TOW
FILE NO. C2891-1
DRAWING NAME: ES-DETAILS.DWG
SCALE: NTS
DESIGNED BY: MKB
CHECKED BY: TOW
DATE: 07/21/20
FILE NO. XXX
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Standard Detail & Specifications
Riprap Outlet Sediment Trap

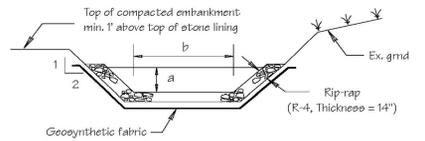


SEE PLAN SHEET FOR DESIGN DATA

Drainage area (D.A.)
Required storage (V_s)
Design dimensions (L x W x D)
Embankment height (H)
Channel depth (a)
Weir length (b)



Profile thru Outlet



Cross-section of Outlet

Standard Detail & Specifications
Riprap Outlet Sediment Trap

Construction Notes:

- The area under embankment shall be cleared, grubbed and stripped of any vegetation and root mat. The pool area shall be cleared.
- The fill material for the embankment shall be free of roots or other objectionable material. The embankment shall be compacted by traversing with equipment while it is being constructed. Maximum height of embankment shall be four (4) feet, measured at centerline of the embankment.
- All fill slopes shall be 2:1 or flatter; cut slopes 1:1 or flatter.
- Elevation of the top of any dike directing water into trap must equal or exceed the height of embankment.
- Storage area provided shall be figured by computing the volume available behind the outlet channel up to the elevation of the crest of the outlet weir channel.
- Filter cloth shall be placed over the bottom and sides of the outlet channel prior to placement of stone. Sections of fabric must overlap at least one (1) foot with section nearest the entrance placed on top. Fabric shall be embedded at least six (6) inches into existing ground at entrance of outlet channel.
- Stone used in the outlet shall be R-4 riprap with a thickness of 14".
- An approved dewatering device shall be considered an integral part of the trap. Dewatering operations shall be conducted in accordance with any and all regulatory requirements.
- Sediment shall be removed and trap restored to its original dimensions when the sediment has accumulated to 1/2 the design depth of the trap. Removed sediment shall be deposited in a suitable area and in such a manner that it will not erode.
- The structure shall be inspected after each rain and repaired as needed.
- Construction operations shall be carried out in such a manner that erosion and water pollution are minimized. Disturbed areas shall be stabilized in accordance with the Standards and Specifications for vegetative Stabilization contained in this Handbook.
- The structure shall be removed and the area stabilized when the contributing drainage area has been properly stabilized.

MAXIMUM DRAINAGE AREA: 15 ACRES

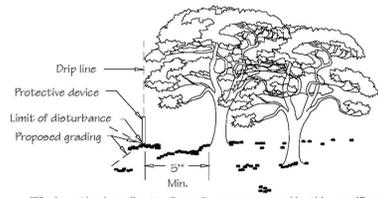
Source: Adapted from MD Stds. & Specs. for ESC	Symbol: RST	Detail No. DE-ESC-3.1.3.3 Sheet 1 of 2
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Effective February 2019

Source: Adapted from MD Stds. & Specs. for ESC	Symbol: RST	Detail No. DE-ESC-3.1.3.3 Sheet 2 of 2
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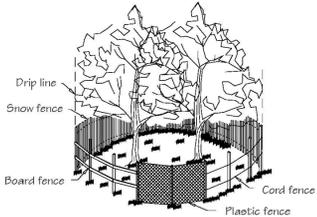
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Standard Detail & Specifications
Sensitive Area Protection



5' min. setback applies to all sensitive areas covered by this specification.

Location of Sensitive Area Protection



Methods of Sensitive Area Protection

Source: Adapted from VA ESC Handbook	Symbol: SAP	Detail No. DE-ESC-3.7.2 Sheet 1 of 3
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Effective February 2019

Standard Detail & Specifications
Sensitive Area Protection

Construction Notes:

Fencing shall be installed at the extents of all sensitive areas. For trees, the fencing shall be installed outside the dripline (mature canopy) and at no time within 5 feet of the trunk. Personnel must be instructed to honor protective devices. The devices described are suggested only, and are not intended to exclude the use of other devices which will protect the trees to be retained. If silt fence is to be used for demarcation purposes, appropriate signage shall be provided a minimum of every 20 feet denoting the area as a sensitive area protection zone.

Materials:

- Snow Fence - Standard 40-inch high snow fence shall be placed at the limits of clearing or construction on standard steel posts set 6 feet apart.
- Board Fence - Board fencing consisting of 4-inch square posts set securely in the ground and protruding at least 4 feet above the ground shall be placed at the limits of clearing with a minimum of two horizontal boards between posts. For tree protection, if it is not practical to erect a fence at the drip line, construct a triangular fence nearer the trunk. The limits of clearing will still be located at the drip line, since the root zone within the drip line will still require protection.
- Plastic Fencing - 40-inch high "international orange" plastic (polyethylene) web fencing secured to conventional metal "T" or "U" posts driven to a minimum depth of 18 inches on 6-foot minimum centers shall be installed at the limits of clearing. The fence should have the following minimum physical qualities:
 - a. Tensile yield: Average 2,000 lbs. per 4-foot width (ASTM D638)
 - b. Ultimate tensile yield: Average 2,900 lbs. per 4-foot width (ASTM D638)
 - c. Elongation at break (%): Greater than 1000% (ASTM D638)
 - d. Chemical resistance: Inert to most chemicals and acids

Source: Adapted from VA ESC Handbook	Symbol: SAP	Detail No. DE-ESC-3.7.2 Sheet 2 of 3
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Effective February 2019

Standard Detail & Specifications
Sensitive Area Protection

- Cord Fence - Posts with a minimum size of 2 inches square or 2 inches in diameter set securely in the ground and protruding at least 4 feet above the ground shall be placed at the limits of clearing with two rows of cord 1/4-inch or thicker at least 2 feet apart running between posts with strips of colored surveyor's flagging tied securely to the string at intervals no greater than 3 feet.
- Earth Berms - Temporary earth berms shall be constructed according to specifications for a Temporary Earth Dike with the base of the berm on the sensitive area side located along the limits of clearing. Earth berms may not be used for this purpose if their presence will conflict with drainage patterns.
- Trunk Armoring (Tree Protection Only) - As a last resort, a tree trunk can be armored with burlap wrapping and 2-inch studs wired vertically no more than 2 inches apart to a height of 5 feet encircling the trunk. If this alternative is used, the root zone within the drip line will still require protection. Nothing should ever be nailed to a tree.

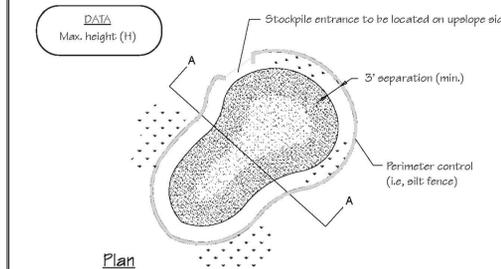
Maintenance:

Fencing and armoring devices shall be in place before any excavation or grading is begun, shall be kept in good repair for the duration of construction activities, and shall be the last items removed during the final cleanup after the completion of the project.

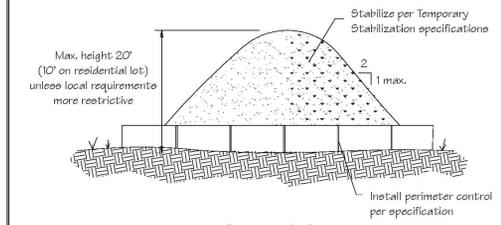
Source: Adapted from VA ESC Handbook	Symbol: SAP	Detail No. DE-ESC-3.7.2 Sheet 3 of 3
---	-----------------------	---

Effective February 2019

Standard Detail & Specifications
Soil Stockpile



Plan



Section A-A

Source: Adapted from Colorado Urban Storm Drainage Criteria Manual, Vol 3	Symbol: SP	Detail No. DE-ESC-3.7.3 Sheet 1 of 2
--	----------------------	---

Effective February 2019

Standard Detail & Specifications
Soil Stockpile

Construction Notes:

- Locate stockpiles so that they are 50 feet from any storm drain inlet, open channel, wetland or waterbody. Redirect any concentrated flow around the stockpile using an approved erosion and sediment control measure.
- Secure the perimeter of the stockpile with an approved erosion and sediment control perimeter device.
- If stockpile is to remain inactive for more than 14 calendar days, the stockpile must be vegetated. Follow the temporary vegetation specifications. The vegetation chosen shall last the duration of the stockpile; the stockpile shall be restabilized if the temporary vegetation dies or erosion results.

Source: Adapted from Colorado Urban Storm Drainage Criteria Manual, Vol 3	Symbol: SP	Detail No. DE-ESC-3.7.3 Sheet 2 of 2
--	----------------------	---

Effective February 2019



CHECKED	06/17/20
DESIGNED	07/06/20
1. REV PER DIRECT	05-29-20 COMMENTS
2. REV PER DIRECT	06-27-20 COMMENTS
3. ADDENDUM #3	

SEDIMENT AND STORMWATER MANAGEMENT PLANS
CONSTRUCTION SITE DETAILS AND NOTES

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EARLY CHILDHOOD CENTER
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DRAWING NAME:	ES_DETAILS.DWG	SHEET NO.:	CE-09 of 39

CE-09

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PROTECT YOURSELF, GIVE THREE WORKING DAYS NOTICE

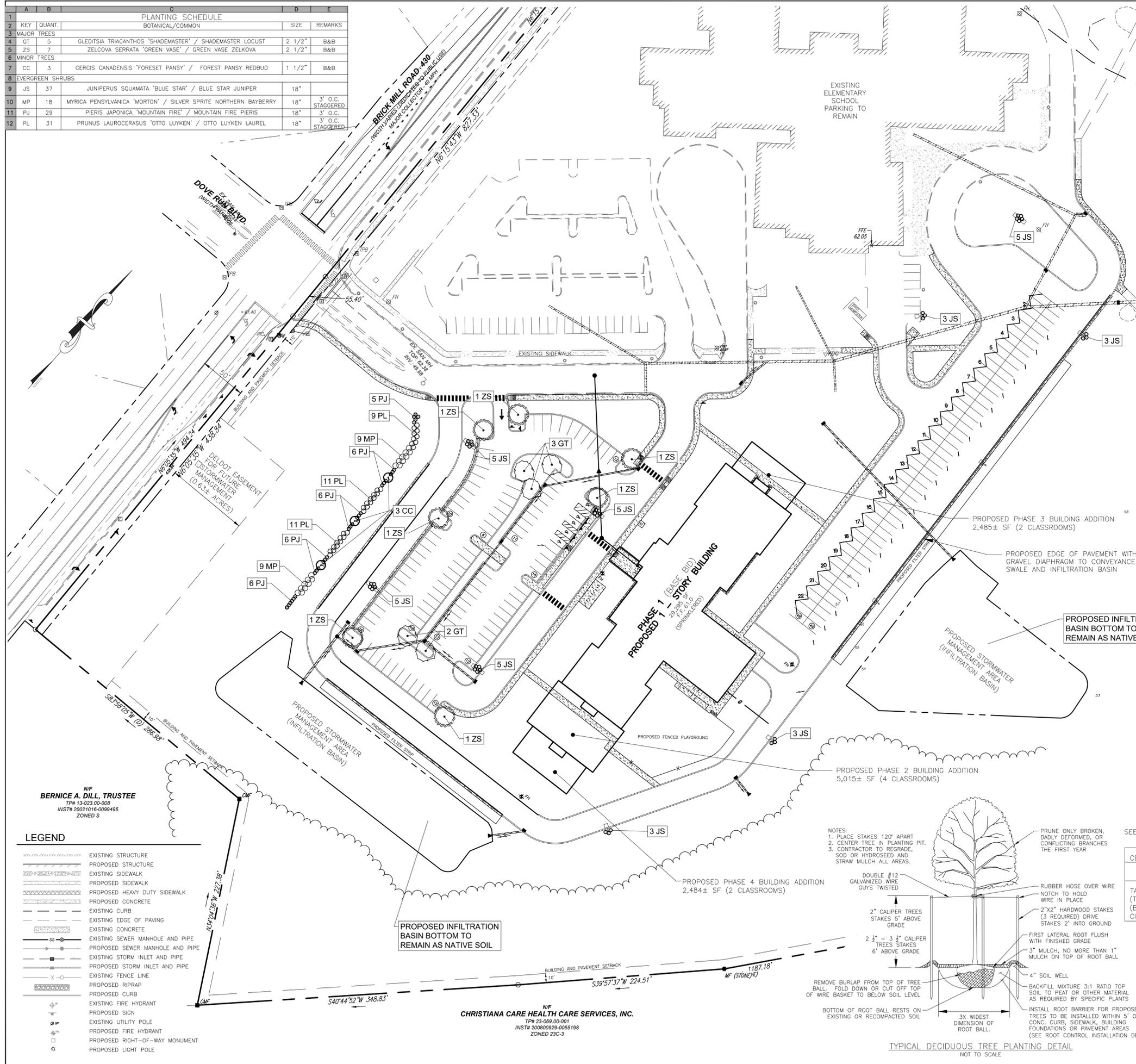


Know what's below.
Call before you dig.

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ALL CONSTRUCTION MUST BE DONE IN COMPLIANCE WITH THE OCCUPATIONAL SAFETY AND HEALTH ACT OF 1970 AND THE RULES AND REGULATIONS THEREOF APPLICABLE.

A	B	C	D	E
PLANTING SCHEDULE				
1	KEY QUANT.	BOTANICAL/Common	SIZE	REMARKS
MAJOR TREES				
4	GT	GLEDTISIA TRIACANTHOS 'SHADEMASTER' / SHADEMASTER LOCUST	2 1/2"	B&B
5	ZS	ZELCOVA SERRATA 'GREEN VASE' / GREEN VASE ZELKOVA	2 1/2"	B&B
MINOR TREES				
6	CC	CERCIS CANADENSIS 'FORESET PANSY' / FORESET PANSY REDBUD	1 1/2"	B&B
EVERGREEN SHRUBS				
9	JS	JUNIPERUS SQAMATA 'BLUE STAR' / BLUE STAR JUNIPER	18"	
10	MP	MYRTICA PENNSYLVANICA 'MORTON' / SILVER SPRITE NORTHERN BAYBERRY	18"	3' O.C. STAGGERED
11	PJ	PIERIS JAPONICA 'MOUNTAIN FIRE' / MOUNTAIN FIRE PIERIS	18"	3' O.C. STAGGERED
12	PL	PRUNUS LAUROCERASUS 'OTTO LUYKEN' / OTTO LUYKEN LAUREL	18"	3' O.C. STAGGERED



GENERAL CONSTRUCTION NOTES

- LANDMARK ENGINEERING, INC. MAKES NO GUARANTEE AS TO THE EXISTENCE OR NON-EXISTENCE, LOCATION, DEPTH, SIZE OR CONDITION OF ANY UNDERGROUND UTILITIES SHOWN ON THIS PLAN NOT ACCESSIBLE FROM THE SURFACE OF THE GROUND. EXISTING UTILITIES ARE SHOWN IN ACCORDANCE WITH INFORMATION PROVIDED BY THE RESPECTIVE UTILITY COMPANIES AT THE TIME THE PLAN WAS PREPARED. THE CONTRACTOR IS TO COORDINATE ALL WORK WITH UTILITY COMPANIES INVOLVED.
- IT IS THE RESPONSIBILITY OF THE OWNER, OR HIS CONTRACTOR, TO VERIFY AND ALLOW FOR THE LOCATION AND DEPTH OF THE UNDERGROUND UTILITIES WITHIN THE WORK AREA SHOWN ON THIS PLAN. THE CONTRACTOR SHALL NOT BEGIN ANY EXCAVATION OR OTHER CONSTRUCTION AROUND OR IMMEDIATELY ADJACENT TO EXISTING UTILITIES WITHOUT NOTIFYING THE UTILITY OWNER(S) AT LEAST SEVENTY-TWO (72) HOURS IN ADVANCE OF THE START OF EXCAVATION OR CONSTRUCTION. TEST PITS FOR UTILITY LOCATIONS MAY OR MAY NOT BE REQUIRED.
- PRIOR TO ANY CONSTRUCTION, IT IS RECOMMENDED THE CONTRACTOR EXCAVATE IN THE AREA OF ANY POTENTIAL UTILITY CROSSING TO VERIFY THAT THE UTILITY WILL NOT INTERFERE WITH CONSTRUCTION. IF, AFTER UNCOVERING THE UTILITY, THERE IS ANY QUESTION CONCERNING A POSSIBLE CONFLICT, THE CONTRACTOR SHALL IMMEDIATELY CONTACT THE ENGINEER. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT ALL EXISTING UTILITIES AND MAINTAIN UNINTERRUPTED SERVICE. ANY DAMAGE DONE TO THEM DUE TO THEIR NEGLIGENCE SHALL BE IMMEDIATELY AND COMPETENTLY REPAIRED AT THEIR EXPENSE.

LANDSCAPE PLAN NOTES

GENERAL NOTES:

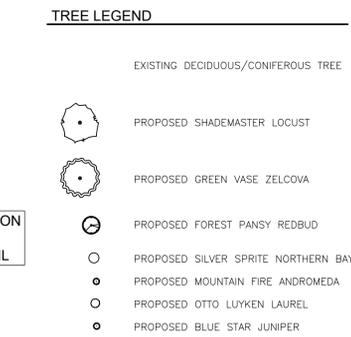
- ALL PLANTS TO BE LOCATED WITH RESPECT TO PROPOSED OR EXISTING UTILITIES.
- EXAMINE ALL ENGINEERING DRAWINGS AND FIELD CONDITIONS FOR SPECIFIC LOCATIONS OF UTILITIES, STRUCTURES, ETC. NOTIFY THE UNDERSIGNED PROFESSIONAL IMMEDIATELY, IN WRITING, IN REFERENCE TO DISCREPANCIES OR LOCATION CONFLICTS.
- IN THE EVENT THAT PLANT QUANTITY DISCREPANCIES OR MATERIAL OMISSIONS OCCUR IN THE PLANTING SCHEDULE, THE PLAN SHALL SUPERSEDE.
- LANDSCAPE CONTRACTOR TO COORDINATE ALL WORK WITH SITE CONTRACTOR.
- ALL TREES, SHRUBS AND PLANTS SHALL CONFORM WITH THE MOST CURRENT VERSION OF THE 'AMERICAN STANDARD FOR NURSERY STOCK' OF THE AMERICAN ASSOCIATION OF NURSERYMEN.
- VERIFICATION OF ALL PLANT MATERIALS TO BE DONE IN FIELD.

PLANT MATERIALS:

- NO PLANT SUBSTITUTION SHALL BE ALLOWED WITH REGARD TO SIZE, SPECIES, NAMED VARIETY OR CULTIVAR, WITHOUT THE PRIOR PERMISSION FROM LANDMARK SCIENCE & ENGINEERING.
- ALL PLANTING MATERIALS AND METHODS SHALL MEET OR EXCEED THE REQUIREMENTS OF THE MUNICIPAL ORDINANCES AND THE AMERICAN STANDARD FOR NURSERY STOCK - ANSI Z60.1 (CURRENT VERSION).
- ALL MATERIALS ARE SUBJECT TO THE APPROVAL OF LANDMARK SCIENCE & ENGINEERING BEFORE, DURING, AND AFTER INSTALLATION.
- ALL PLANT MATERIAL SHALL BE HEALTHY, VIGOROUS, AND FREE OF PESTS AND DISEASE.
- ANY PLANT MATERIAL WHICH IS DISEASED, DISTRESSED, DEAD, OR REJECTED (PRIOR TO SUBSTANTIAL COMPLETION) SHALL BE PROMPTLY REMOVED FROM THE SITE AND REPLACED WITH MATERIAL OF THE SAME SPECIES, QUANTITY, AND SIZE MEETING ALL PLANT LIST SPECIFICATIONS.
- ALL PLANT MATERIAL SHALL BE CONTAINER GROWN OR BALLED AND BURLAPPED AS INDICATED IN THE PLANT LIST.
- ALL PLANTS SHALL BE NURSERY GROWN UNDER THE SAME CLIMATE AS THE LOCATION OF THIS PROJECT FOR AT LEAST 2 YEARS AND TAGGED WITH A DURABLE LABEL INDICATING THE GENUS, SPECIES AND SPECIFIED VARIETY OR CULTIVARS.

PLANTING:

- REFER TO GRASS MIX COMPOSITION SCHEDULE ON THIS SHEET FOR SEEDING MIXTURE OF PROPOSED GRASSED AREAS.
- ALL PROPOSED AREAS OF GRASSED COVER SHALL BE PLACED AS HYDROSEED IMMEDIATELY AFTER CONSTRUCTION.
- ALL PROPOSED TREES AND SHRUBS SHALL BE PLANTED AFTER ONE (1) FULL SEASON TO ALLOW SLOPE STABILIZATION AND COMPLETE GRASS GROWTH.
- CONTRACTOR SHALL BE RESPONSIBLE FOR DELIVERY SCHEDULE AND PROTECTION BETWEEN DELIVERY AND PLANTING TO MAINTAIN HEALTHY PLANT CONDITIONS.
- SOIL MUST BE FROST-FREE, FRIABLE AND NOT MUDDY AT THE TIME OF PLANTING.
- IN GENERAL TREES ARE TO BE PLANTED AT INTERVALS WHICH WILL ALLOW THEM TO FULLY DEVELOP INTO CONTINUOUS MASSES OF THE INDIVIDUAL SPECIES. THEREFORE, NO PRUNING TO SHAPE OR SHEARING IS REQUIRED OR DESIRABLE. WHERE DEAD OR CONFLICTING BRANCHING DEVELOPS, IT SHOULD BE PRUNED OUT.



PLANTING REQUIREMENTS

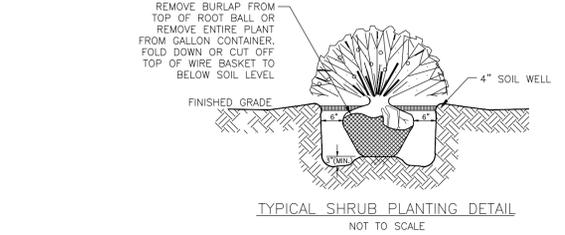
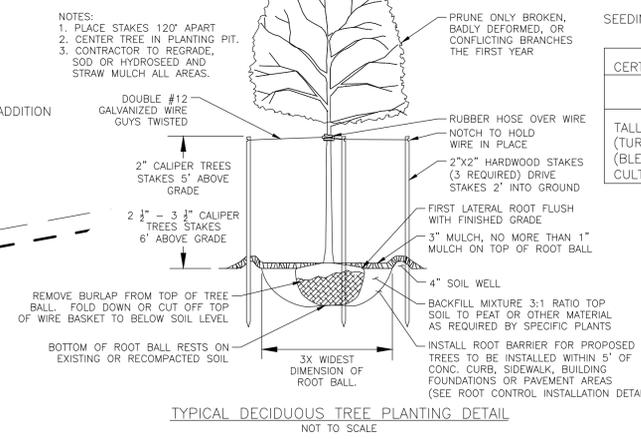
CATEGORY	REQUIRED	PROVIDED
NUMBER OF PARKING SPACES: 116		
INTERNAL ISLANDS REQUIRED: 1/12 PARKING SPACES	10	10
SHADE TREES REQUIRED: 1/12 PARKING SPACES	10	12
PARKING LOT BUFFER REQUIRED:	234 LF	234 LF
SCREENING SHRUBS REQUIRED: 1/3 LF	78	78
SCREENING TREES PROVIDED:		3
LIGHT POLES: 9		
SHRUBS AT BASE OF POLES		37

FILTER STRIP SEEDING

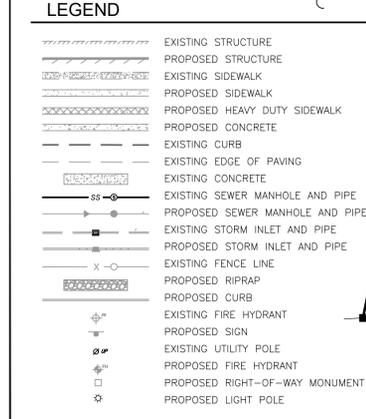
SEEDING MIXTURES SEEDING RATE OPTIMUM SEEDING DATES

O = OPTIMUM, A = ACCEPTABLE PLANTING PERIOD

CERTIFIED SEED	LBS/AC	LBS/1000	COSTAL PLAIN		PEDIMONT		ALL
			2/1-4/30	5/1-8/15	3/1-4/30	5/1-8/15	
TALL FESCUE (TURF TYPE) (BLEND OF 3 CULTIVARS)	150	3.5	O	A	O	A	O



NF
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TP# 13-023 00-009
INST# 20021016-009495
ZONED S



NF
CHRISTIANA CARE HEALTH CARE SERVICES, INC.
TP# 23-069 00-001
INST# 20080929-005198
ZONED 23C-3

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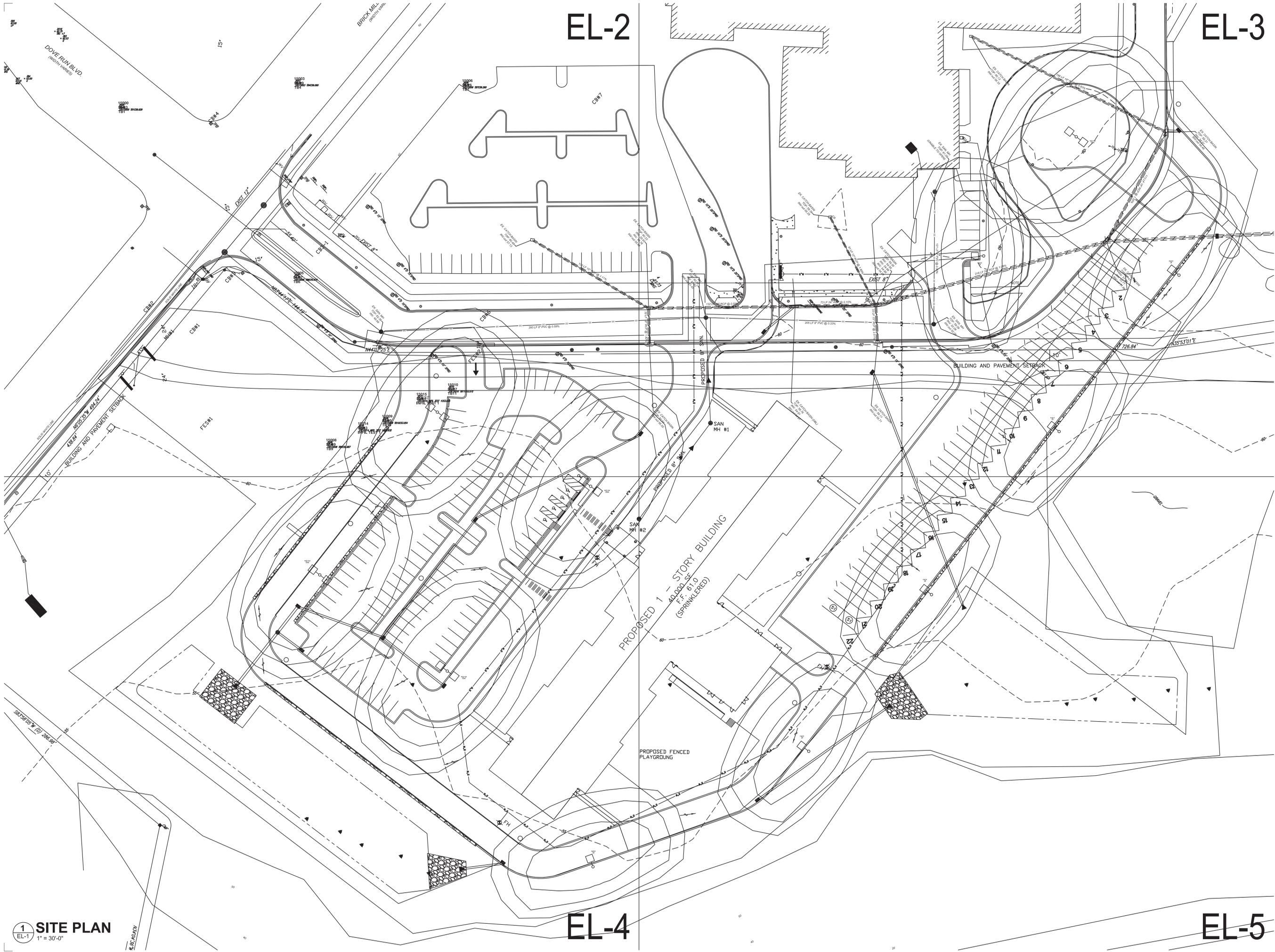
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CHECK BY: TCW SHEET: CL-01 of 01

COMMISSION:
C2891-1
FILE NAME: LANDSCAPE.dwg



1 SITE PLAN
 EL-1
 1" = 30'-0"

EL-2

EL-3

EL-4

EL-5

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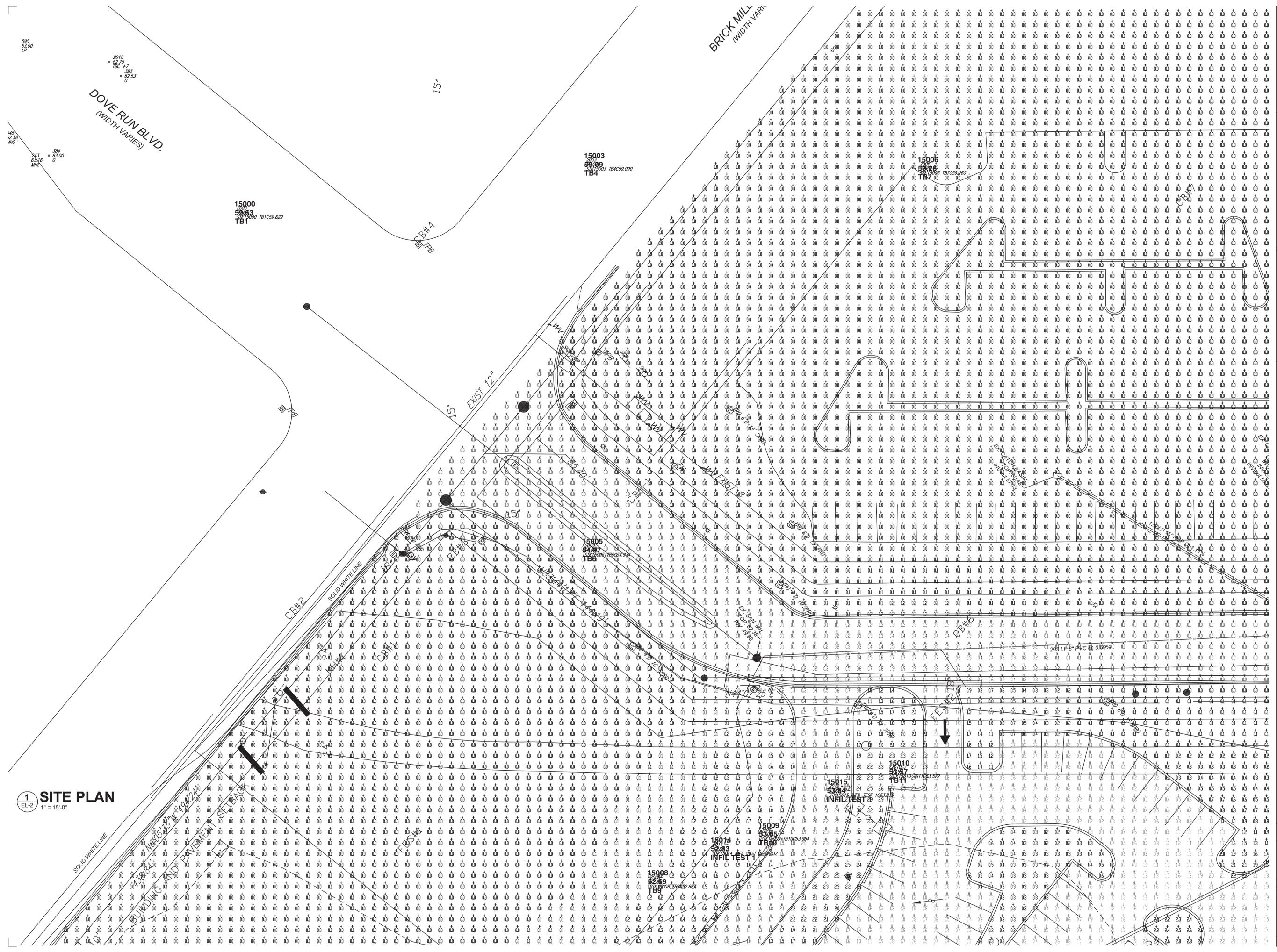
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SITE PLAN POINT TO POINT CALCULATION
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 PROJECT NO. 2001
 SHEET NO.

EL-1
 DATE 05/01/2020



595
63.00
2018
62.75
383
62.53
C

15000
59.63
15000 TB1C59.629
TB1

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TB4

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TB9

15008
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15008 TB8C59.890
TB8

1 SITE PLAN
EL-2
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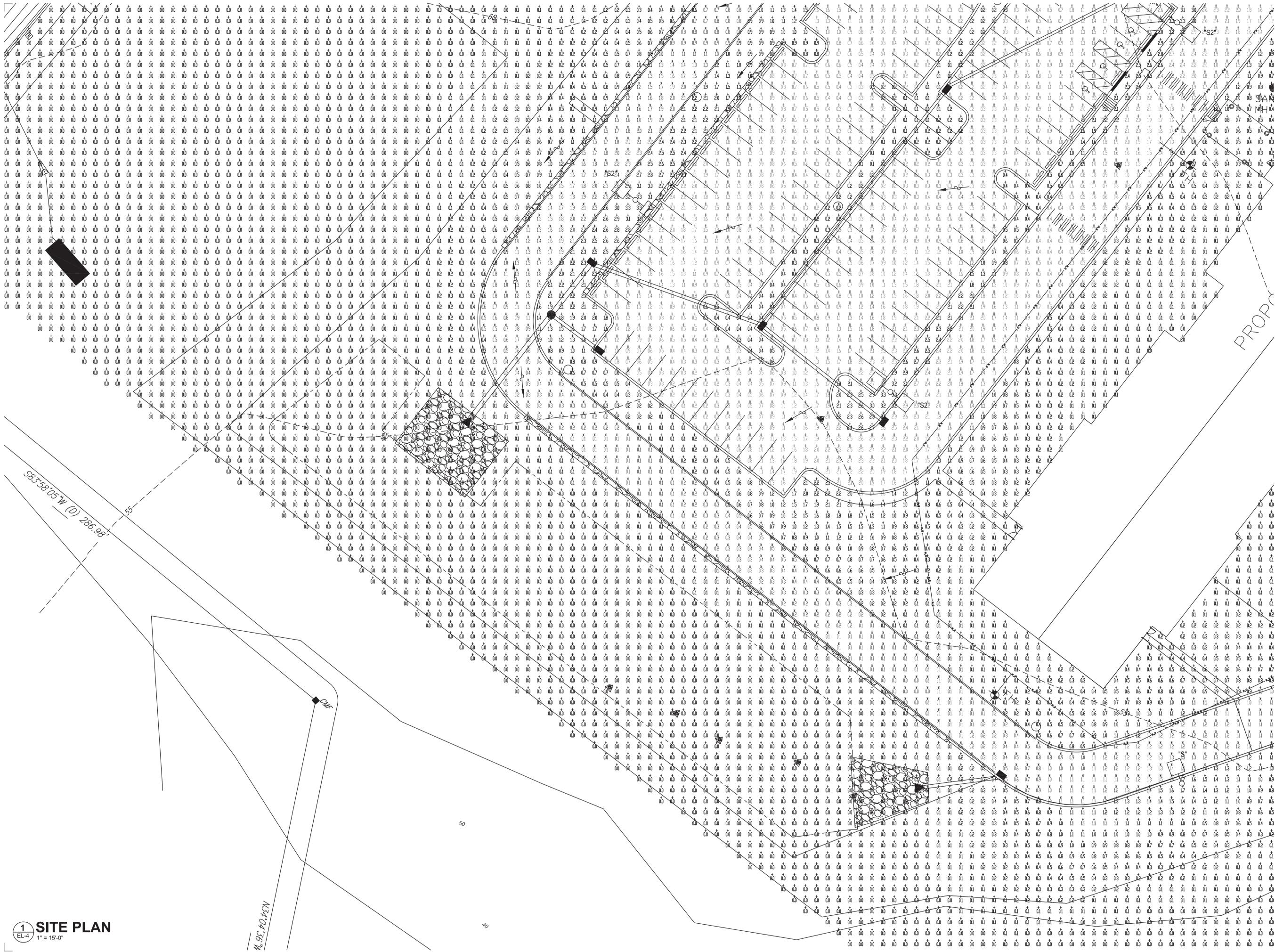
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1 SITE PLAN
EL-4
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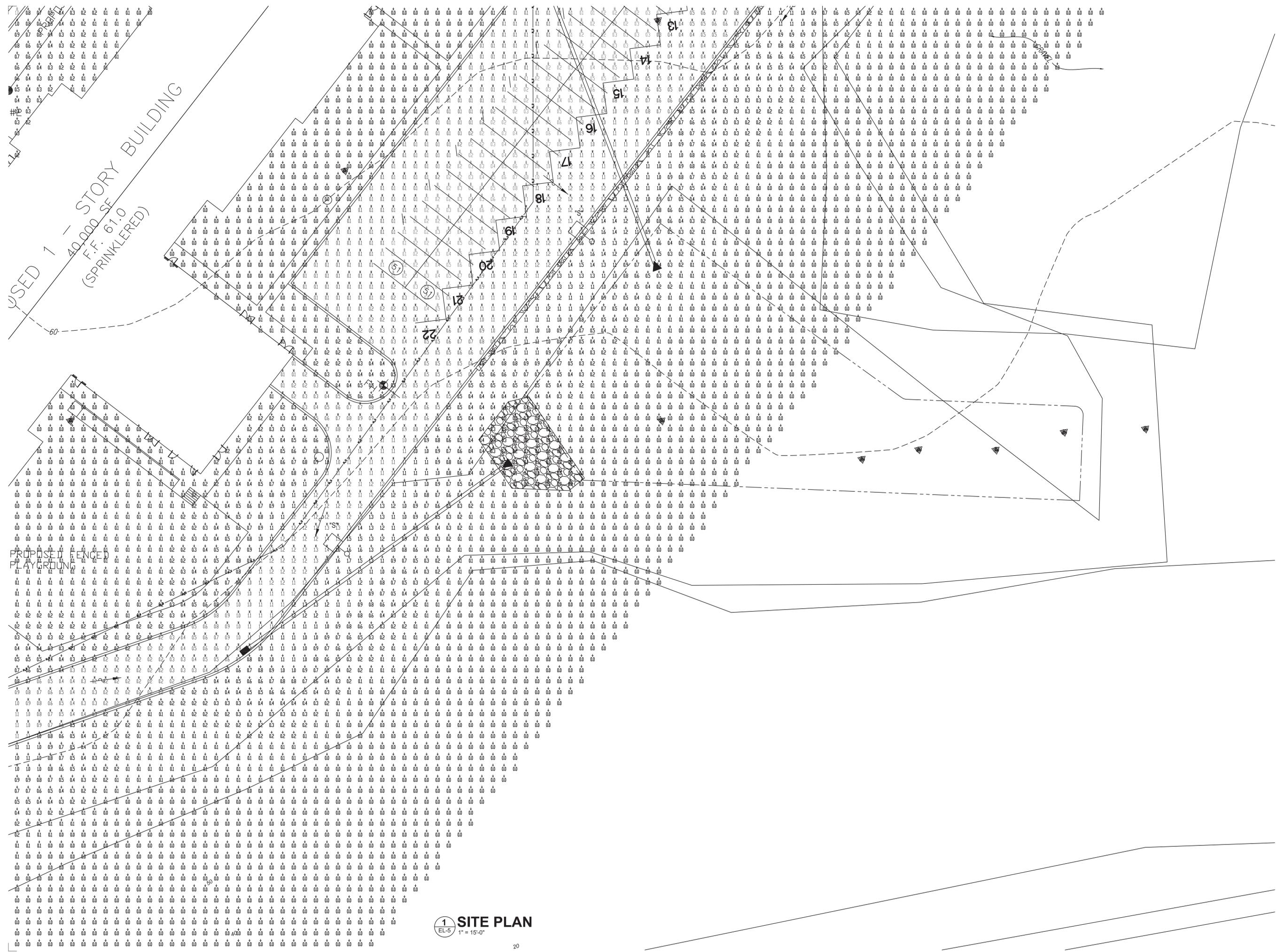
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1 SITE PLAN
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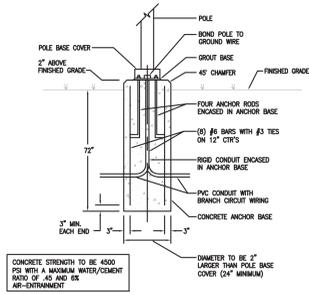
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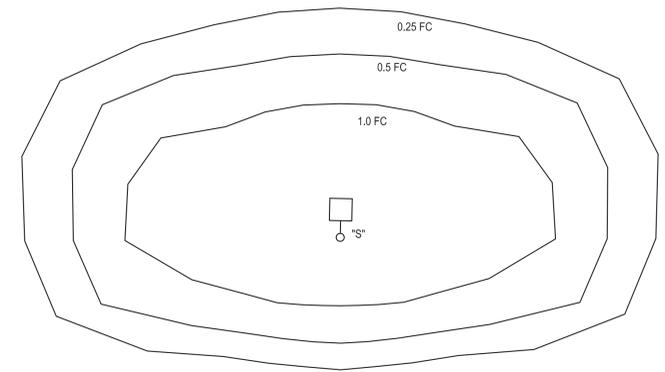


REINFORCED ANCHOR BASE FOR FIXTURES IN GRASS AREAS
NOT TO SCALE

LIGHT FIXTURE SCHEDULE					
<p>NOTES:</p> <p>1. EQUIVALENT FIXTURE PACKAGES MAY BE SUBMITTED FROM THESE LIGHTING REPRESENTATIVES. DIVERSIFIED LIGHTING, ILLUMINATIONS, LIGHTING SOLUTIONS, AND PRISM LIGHTING. FIXTURES SUBMITTED AS EQUIVALENTS SHALL BE OF THE SAME TYPE, DIMENSION, ACCESS TO BALLASTS, DRIVERS, AND LAMPS PERFORMANCE AND QUALITY OF THOSE SPECIFIED. EQUIVALENT MANUFACTURERS MUST MEET ALL CRITERIA OF THE BASE FIXTURE SPECIFIED. ANY DEVIATIONS WHICH DO NOT REFLECT THE BASE FIXTURE WILL RESULT IN A REJECTED SHOP DRAWING DURING SUBMITTAL PERIOD.</p> <p>2. ALL FIXTURE COLORS, FINISHES, AND MOUNTING HEIGHTS SHALL BE VERIFIED WITH THE ARCHITECT PRIOR TO APPROVAL OF SHOP DRAWINGS.</p> <p>3. ALL LED DRIVERS SHALL BE INTEGRAL HIGH EFFICIENCY UNIVERSAL INPUT VOLTAGE DRIVERS, RATED FOR MINIMUM 50,000 HOURS AT 70% LUMEN MAINTENANCE, UNLESS NOTED OTHERWISE.</p>					
TYPE	MANUFACTURER	CATALOG NUMBER	LAMPS	MOUNTING	REMARKS
S	MACRAM EDITION	FIXTURES: TLM-EGG-LED-208-13-864-PT POLE: 325-0-4-30-0-9-4-1-0	132W LED, 3000K, 15400 LUMENS, CR 70	FIXTURE ARM MOUNTED 30\"/>	
S2	MACRAM EDITION	FIXTURES: TWO TLM-EGG-LED-208-13-864-PT POLE: 325-0-4-30-0-9-4-1-0	(2) 132W LED, 3000K, 15410 LUMENS, CR 70	TWO FIXTURES ARM MOUNTED AT 180° 30\"/>	

LUMINAIRE SUMMARY					
TYPE	SYMBOL	DESCRIPTION	LAMP	LUMENS	LLF
"S"		SINGLE SHOEBOX, ES TYPE II DISTRIBUTION	132W LED	15400	0.80
"S2"		TWO SHOEBOXES AT 180°, ES TYPE IV DISTRIBUTION	264W LED	30220	0.80

CALCULATION SUMMARY				
GRID TYPE	# FTS	SPACING	GROUP	AVERAGE FC
HORIZONTAL	21400	5	+	0.19
	4104	5	X	0.55
	2736	5		0.87



TYPICAL ISOCURVE TEMPLATE
SCALE: 1" = 30'-0"

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