

ADDENDUM ISSUED BY

ABHA Architects, Inc.
1621 N. Lincoln Street
Wilmington, Delaware 19806

NOTICE: Attach this Addendum to the Project Manual for this project. It modifies and becomes a part of the Contract Documents. Work or materials not specifically mentioned herein are to be as described in the main body of the Specifications and as shown on the Drawings.

Acknowledge receipt of the Addendum in the spaced provided on the Bid Form. This Addendum is being transmitted to all contractors who signed in at the pre-bid meeting. If there are any problems with legibility or content, please contact ABHA Architects, Inc. (302) 658-6426.

ATTACHMENTS

Pre-Bid Meeting Attendance Record
Wage Rate dated March 15 2017
Section 004114 – Bid Form Addendum 1
Section 31 2000 – Earthmoving Addendum 1
Drawings C-100 through C-102 dated 3/24/2017
Drawing F-131 dated 3/24/2017

REVISIONS TO PROJECT MANUAL

Section 00 2110 – Instructions to Bidders
Replace Prevailing Wage rates at the end of this section with attached rates dated March 15 2017

Section 00 4113 – Bid Form
Replace entire section with attached Section 00 4414 Bid Form Addendum 1

Section 31 2000 – Earthmoving Addendum 1
Replace entire section with attached

REVISIONS TO DRAWINGS

Remove Site Construction Plans C-100 through C-102 dated 3-6-17 and replace with drawings C-100 through C-102 dated 3/24/17 (attached)

Remove undated Site Electrical Plan E-131 and replace with E-131 dated 3/24/17 (attached)

Changes on Drawing E131, “SITE PLAN – ELECTRICAL”

- a. ADD/ADJUST Parking Lot Lighting. See attached revised Drawing.
- b. ADD Note #7. See attached revised Drawing.

END OF ADDENDUM NO. 1

Brandywine High School
 Contract BSD17010-SITWORK
 Pre-bid meeting attendance sheet
 3/22/2017

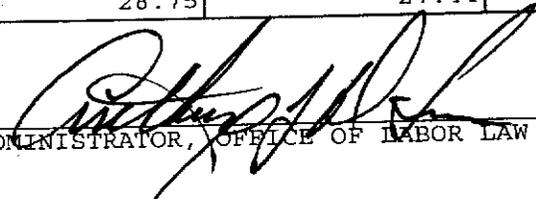
Your Name	Representing (Firm Name)	Mailing Address	Telephone	Fax	Email
Rick Myrick	Sam's Construction	PO Box 9827 Wilmington, DE 19809	302-654-6542	302-654-6599	samsconstructionllc@verizon.net
Brian Havens	GrassBusters	935 Rahway Dr. Newark, DE 19711	302-367-8305	302-292-1197	Lisae@gblinc.net
Shaun Rodgers	Reybold Construction	116 East Scotland Dr. Bear, DE 19701	302-593-0696		srodgers@reybold.com
Steve Newman	Reybold Construction	116 East Scotland Dr. Bear, DE 19701	609-202-4112		snewman@reybold.com
Danny Hanna	ADEL Construction	10 Adel Drive Newark, DE 19702	302-453-8286	302-453-9550	Dhanna@a-del.com
Vincent Dills	Merit Construction Engineers	5700 Kirkwood Highway Wilmington, DE 19808	302-992-9810	302-992-9568	vincent@mce85.com
Matt Armiger	JJID	100 Julian Lane Bear, DE 19701	302-690-7039		marmiger@jjid.com
Bob Leboffe	Gessler Construction	565 E. St. Andrews Media, PA 19063	610-497-2480	610-494-6903	gesslerconstruction@comcast.net
Tony Ventresca	Ventresca Bros., Inc.	2300 N. DuPont Hwy New Castle, DE 19720	302-658-6436	302-658-2360	tony@ventrescabros.com
Tim Stephens	Stephens Excavating LLC	PO Box 291 Unionville, PA 19375	484-999-4988		tim@stephensex.com

STATE OF DELAWARE
DEPARTMENT OF LABOR
DIVISION OF INDUSTRIAL AFFAIRS
OFFICE OF LABOR LAW ENFORCEMENT
4425 NORTH MARKET ST. 3RD FLR
WILMINGTON, DE 19802
PHONE: (302) 761-8200

PREVAILING WAGES FOR BUILDING CONSTRUCTION EFFECTIVE MARCH 15, 2017

CLASSIFICATION	NEW CASTLE	KENT	SUSSEX
ASBESTOS WORKERS	22.86	28.16	40.98
BOILERMAKERS	68.44	34.72	51.05
BRICKLAYERS	51.99	51.99	51.99
CARPENTERS	53.81	53.81	42.77
CEMENT FINISHERS	72.28	46.71	22.17
ELECTRICAL LINE WORKERS	45.47	38.99	29.73
ELECTRICIANS	66.85	66.85	66.85
ELEVATOR CONSTRUCTORS	90.49	64.49	31.94
GLAZIERS	71.20	71.20	56.66
INSULATORS	55.48	55.48	55.48
IRON WORKERS	62.85	62.85	62.85
LABORERS	44.70	44.70	44.70
MILLWRIGHTS	69.18	69.18	55.75
PAINTERS	48.47	48.47	48.47
PILEDRIVERS	75.27	39.35	31.83
PLASTERERS	29.84	29.84	22.12
PLUMBERS/PIPEFITTERS/STEAMFITTERS	65.95	51.49	57.01
POWER EQUIPMENT OPERATORS	67.29	67.29	43.83
ROOFERS-COMPOSITION	24.01	23.70	21.64
ROOFERS-SHINGLE/SLATE/TILE	18.39	21.86	17.19
SHEET METAL WORKERS	67.03	67.03	67.03
SOFT FLOOR LAYERS	51.12	51.12	51.12
SPRINKLER FITTERS	57.29	57.29	57.29
TERRAZZO/MARBLE/TILE FNRS	57.72	57.72	47.51
TERRAZZO/MARBLE/TILE STRS	66.02	66.02	55.02
TRUCK DRIVERS	28.75	27.44	20.94

CERTIFIED: 3/15/17

BY: 
ADMINISTRATOR, OFFICE OF LABOR LAW ENFORCEMENT

NOTE: THESE RATES ARE PROMULGATED AND ENFORCED PURSUANT TO THE PREVAILING WAGE REGULATIONS ADOPTED BY THE DEPARTMENT OF LABOR ON APRIL 3, 1992.

CLASSIFICATIONS OF WORKERS ARE DETERMINED BY THE DEPARTMENT OF LABOR. FOR ASSISTANCE IN CLASSIFYING WORKERS, OR FOR A COPY OF THE REGULATIONS OR CLASSIFICATIONS, PHONE (302) 451-3423.

NON-REGISTERED APPRENTICES MUST BE PAID THE MECHANIC'S RATE.

THESE RATES ARE BEING PROVIDED IN ACCORDANCE WITH DELAWARE'S FREEDOM OF INFORMATION ACT.

THEY ARE NOT INTENDED TO APPLY TO ANY SPECIFIC PROJECT.

SECTION 004114
BID FORM ADDENDUM 1
BSD17010_SITEIMP

FOR BIDS DUE: _____

TO: BRANDYWINE SCHOOL DISTRICT
1311 BRANDYWINE BLVD.
WILMINGTON, DE. 19809

FOR: BRANDYWINE HIGH SCHOOL
1400 FOULK ROAD
WILMINGTON, DE. 19803

FOR CONTRACT: BSD17010 -SITEIMP (SITE_IMPROVEMENTS)

NAME OF BIDDER: _____

DELAWARE BUSINESS LICENSE NO.: _____

(A copy of Bidder's Delaware Business License must be attached to this form.)

TAXPAYER ID NO.: _____

(OTHER LICENSE NOS.): _____

PHONE NO.: () _____ FAX NO.: () _____

EMAIL ADDRESS: _____

The undersigned, representing that he has read and understands the Bidding Documents, including the complete Project Manual and the Drawings as listed in the Table of Contents, all dated _____, 2017, 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:

(expressed in words)

(\$ _____)
(expressed in figures)

BID FORM

ALLOWANCE NO. 1 [PROVIDE PRICE FOR A TOTAL OF 2,500 SY ADDITIONAL PAVEMENT PATCHING AT MULTIPLE LOCATIONS TO BE USED AT OWNER'S DISCRETION]

_____ (EXPRESSED IN WORDS)

\$ _____ (EXPRESSED IN FIGURES)

ALLOWANCE NO. 2 [PROVIDE PRICE FOR 250 TONS FOR BORROW TYPE C] AS DESCRIBED IN SECTION 31 2000 EARTHMOVING

_____ (EXPRESSED IN WORDS)

\$ _____ (EXPRESSED IN FIGURES)

ALTERNATES

Alternate prices conform to applicable project specification section. Refer to specifications for a complete description of the following Alternates. An "ADD" or "DEDUCT" amount is indicated by the crossed out part that does not apply.

ALTERNATE NO. 1: CLEAN, REPAIR AND RE-SURFACE EXISTING TENNIS COURT. INSTALL TWO NEW NETS AND POSTS

Add/Deduct: _____
(expressed in words)
(\$ _____)
(expressed in figures)

UNIT PRICES

Unit prices conform to applicable project specification project. The difference between Add or Deduct Unit Prices of the same item may not exceed 15%. Refer to the specifications for a complete description of the following Unit Prices:

Unit Price No 1: Borrow Type C for quantity described in Allowance 2.

Price per ton
Add: _____ Deduct: _____
Deduct: _____

BID FORM

SIGNATURE FORM

I / We acknowledge Addendas Numbered _____ and the price(s) submitted include any cost / schedule impact they may have.

This bid shall remain valid and cannot be withdrawn for 30 days from the date of opening of bids (60 days for School Districts and Department of Education), and the undersigned shall abide by the Bid Security forfeiture provisions. Bid Security is attached to this Bid.

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 achieve substantial completion of all the work within _____ calendar days of the Notice to Proceed.

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)

(SEAL)

(Title)

Date: _____

Attachments:

- Sub-Contractor List.
- Non-Collusion Statement.
- Affidavit(s) of Employee Drug Testing Program
- Bid Security.

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.

All the terms and conditions of this Contract 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 _____, 20__

My Commission expires : _____ NOTARY PUBLIC _____

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

BID FORM- BID BOND
TO ACCOMPANY PROPOSAL
(Not necessary if security is used)

KNOW ALL MEN BY THESE PRESENTS That: _____
_____ of _____ in the County of _____
_____ and State of _____ as **Principal**, and _____
_____ of _____ in the County of _____
and State of _____ as **Surety**, legally authorized to do business in the State of Delaware
("State"), are held and firmly unto the **State** in the sum of _____
_____ Dollars (\$ _____), or _____ percent not to exceed _____
_____ Dollars (\$ _____)
of amount of bid on Contract No. _____, to be paid to the **State** for the use and
benefit of _____ (*insert State agency name*) for which payment
well and truly to be made, we do bind ourselves, our and each of our heirs, executors, administrators, and
successors, jointly and severally for and in the whole firmly by these presents.

NOW THE CONDITION OF THIS OBLIGATION IS SUCH That if the above bonded **Principal**
who has submitted to the _____ (*insert State agency name*) a
certain proposal to enter into this contract for the furnishing of certain material and/or services within the
State, shall be awarded this Contract, and if said **Principal** shall well and truly enter into and execute this
Contract as may be required by the terms of this Contract and approved by the _____
_____ (*insert State agency name*) this Contract to be entered into within twenty days after
the date of official notice of the award thereof in accordance with the terms of said proposal, then this
obligation shall be void or else to be and remain in full force and virtue.

Sealed with _____ seal and dated this _____ day of _____ in the year of our Lord two
thousand and _____ (20____).

SEALED, AND DELIVERED IN THE
Presence of

Name of Bidder (Organization)

Corporate
Seal

By:

Authorized Signature

Attest _____

Title

Name of Surety

Witness: _____

By:

Title

BID FORM

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 that complies with this regulation:

CONTRACTOR/SUBCONTRACTOR

NAME: _____

CONTRACTOR/SUBCONTRACTOR

ADDRESS: _____

AUTHORIZED REPRESENTATIVE

(TYPED): _____

AUTHORIZED REPRESENTATIVE

(SIGNATURE): _____

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

My Commission expires : _____ NOTARY PUBLIC _____

END OF DOCUMENT

END OF SECTION

SECTION 312000
EARTHMOVING

PART 1 GENERAL

1.01 DESCRIPTION

- A. Provide labor, materials, and equipment necessary to complete the work of this Section, including but not limited to the following:
 - 1. Filling and backfilling to attain indicated grades.
 - 2. Excavation, rough and finish grading.
 - 3. Furnishing and installing graded aggregate base course material for pavements, hot-mix patches and other structures.
 - 4. Undercut excavation and furnishing graded aggregate base course for undercut excavation.
 - 5. Furnishing excavation support systems, as required, including shoring and bracing.
 - 6. Excavation for trenches.
 - 7. Preparing topsoil stripped from the site and placing topsoil in locations requiring seeding or sodding.

- B. Allowances and Unit Prices
 - 1. The Base Bid shall include an allowance for supplying and installing 250 Tons of Borrow Type "C" for trench backfill when suitable on-site material is not available per the detail on Sheet C-102. Said price shall include removal and disposal of any unsuitable on-site material.
 - 2. Provide a unit price for supplying and installing Borrow Type "C". This unit price will be used to increase or decrease the allowance based on actual field conditions. Refer to Part 4 of this section for measurement and payment.

- C. Definitions
 - 1. Excavation: removal and disposal of all material encountered when establishing required grade elevations, including pavements and other obstructions visible on the ground surface, and underground structures and utilities indicated to be demolished and removed, and unsuitable subgrade material.
 - 2. Unauthorized excavation: Removal of materials beyond specified subgrade elevations without approval of Engineer.

1.02 QUALITY ASSURANCE

- A. Requirements of Regulatory Agencies
 - 1. All excavations shall be in compliance with Federal Occupational Safety and Health Act.
 - 2. Excavation work shall be in compliance with application requirements of other governing authorities having jurisdiction.

B. Standards

1. Refer to the following sections in the Delaware Department of Transportation Standard Specifications for Road and Bridge Construction, dated August 2016, latest revision. (Hereinafter referred to as the "Standard Specifications")

- Section 202: Excavation and Embankment
- Section 207: Structural Excavation and Backfill
- Section 209: Borrow
- Section 301: Graded Aggregate Base Course
- Section 302: Stone
- Section 908: Soil Stabilization Practices
- Section 1001: Borrow
- Section 1004: Coarse Aggregate
- Section 1005: Graded Aggregate

2. American Society for Testing and Materials (ASTM);
 - D-1556: Density of Soil in Place by the Sand-Cone Method.
 - D-698: Moisture Density Relations of Soils and Soil Aggregate Mixtures
 - D-2049: Relative Density of Cohesionless Soils.
 - D-2166: Unconfined Compressive Strength of Cohesive Soil.
 - D-2922: Density of Soil and Soil Aggregate in Place by Nuclear Methods (Shallow Depth)

1.03 SUBMITTALS

A. Material Certification and delivery Slips for:

1. Borrow
2. Graded Aggregate Base Course
3. Topsoil and Special Planting Soil

1.04 JOB CONDITIONS

A. Existing Utilities

1. Should uncharted, or incorrectly charted, piping or other utilities be encountered during excavation, consult the Utility Owner immediately for directions. Cooperate with the Owner and utility companies in keeping respective services and facilities in operation. Repair damaged utilities to satisfaction of utility Owner.
2. Do not interrupt existing utilities serving facilities occupied and used by the Owner.
3. Demolish and completely remove from site existing underground utilities indicated to be removed. Coordinate with utility companies for shut-off of services if lines are active.

B. Use of Explosives: The use of explosives is not permitted unless approved by the Engineer.

C. Protection of Persons and Property

1. Barricade open excavations occurring as part of this work and post with warning signs as required to protect persons on the site.

2. Protect trees, shrubs, lawns and other features remaining as part of final landscaping.
3. Protect structures, utilities, sidewalks, pavements and other facilities from damage caused by settlement lateral movement undermining, washout and other hazards created by earthwork operations.
4. In the event of damage, immediately make all repairs and replacements to the approval of the Engineer at no cost to the Owner.

D. Dust Control

1. Use all means necessary to control dust on and near the work if such dust is caused by the Contractor's operations during performance of the work or if resulting from the conditions in which the Contractor leaves the site.
 2. Thoroughly moisten all surfaces as required to prevent dust being a nuisance to the public, neighbors and concurrent performance of other work on the site.
- E. Weather Conditions: Do not place, spread, or roll fill material during freezing, raining, or otherwise unfavorable weather conditions.

PART 2 PRODUCTS

2.01 GENERAL

- A. For approval of borrow materials, at least five (5) working days in advance of intention to import material, designate the proposed borrow area, and provide samples to prove the quality and suitability of the material.

2.02 ON-SITE FILL

- A. All on-site materials used for fill shall be acceptable to the Engineer and shall be minimally subject to the following requirements:
1. Free from deleterious substances, stumps, brush, weeds, roots, sod, rubbish, garbage and matter that may decay.
 2. Free of large rocks or lumps that may create voids or prevent proper compaction.

2.03 BORROW FILL MATERIAL

- A. Free from deleterious substances, stumps, brush, weeds, roots, sod, rubbish, garbage and matter that may decay, and shall be Borrow Type "C" conforming to Section 1001 of the Standard Specifications.

2.04 TRENCH AND CIVIL STRUCTURE BACKFILL MATERIAL

- A. Backfill for civil structures shall conform to the requirements of Section 209 of the Standard Specifications.
- B. Backfill for trenches shall conform to the requirements of Section 209 of the Standard Specifications.
- C. All trench and civil structure backfill material shall meet the requirements of Section 1001 of the Standard Specifications for Borrow Type C backfill. All suitable excavated material,

which meets the requirements of Section 1001 of the Standard Specifications shall be used for structure or trench backfill as far as practicable.

2.05 GRADED AGGREGATE BASE COURSE

- A. Graded Aggregate base course for bituminous and concrete pavements and other structures shall be Type "B" conforming to the requirements for Graded Aggregate in Sections 301 and 1005 of the Standard Specifications.

2.06 GEOTEXTILE STABILIZATION FABRIC

- A. Geotextile stabilization fabric used for undercut excavation shall be a woven polypropylene geotextile designed for base course reinforcement and subgrade stabilization. Geotextile shall have a minimum tensile strength of 500 lbs, and shall be Mirafi HP565, or approved equal.

2.07 TOPSOIL

- A. Topsoil furnished from within or outside the project limits shall conform to Section 908 of the Standard Specifications except as modified by the following requirements.
 - 1. Topsoil shall not contain stones, lumps, roots or other objects larger than one inch in any dimension.
 - 2. Acid-Alkaline Range: pH 6.0 to 7.5.
 - 3. Organic Content not less than 1.5% by weight.
 - 4. Free of pests, pest larvae, and matter toxic to plants.
 - 5. Maximum soluble salts: 500 ppm
 - 6. Free of viable Bermudagrass, quackgrass, Johnsongrass, nutsedge, poison ivy, Canada thistle, and other objectionable grassy or broadleaf weeds.
- B. Topsoil Furnished from Outside Project Limits
 - 1. Gradation range:
 - Sand (2.00 mm to 0.05 mm) 40-80 percent
 - Silt (0.050 mm to 0.005 mm) 10-30 percent
 - Clay (0.005 mm and smaller) 10-30 percent
 - a. When one-half of the sand content is larger than 0.500 mm, the maximum sand content shall be seventy-five percent; and maximum clay content shall be fifteen percent.
 - b. Lower limits of silt and clay shall be flexible to extent that soils with minimum combined silt and clay content of twenty percent shall be satisfactory. However, if more than one-half of the sand is larger than 0.50 mm., then minimum clay content shall be fifteen percent, or the minimum combined silt and clay content shall be twenty-five percent.
 - 2. Organic content:
 - a. Minimum of 1.5 percent by weight.
 - b. If necessary, add peat at the rate necessary to attain minimum organic content.

PART 3 EXECUTION

3.01 INSPECTION BY CONTRACTOR

- A. Examine the areas and conditions under which excavating, filling and grading are to be performed. No extra cost or time allowances will be granted for conditions existing and visible at the time of the bid opening.

3.02 PREPARATION

- A. Prior to commencement of work, establish location and extent of all utilities in the work areas. Maintain and protect, as required, existing utilities which pass through the work area.
- B. Prior to excavation in pavement areas, saw cut existing pavement in accordance with Section 762 of the Standard Specifications.

3.03 EXCAVATION

A. Unauthorized Excavation

Unauthorized excavation shall not be at the Owner's expense. Under roadways and pipes, fill unauthorized excavation by removing all loosened material and providing select material as required to attain a firm and unyielding subgrade and/or foundation and to attain required grade elevations.

B. Rock Excavation

Rock Excavation shall apply to the removal of bedrock and ledgerock which cannot be accomplished without blasting or the use of rippers, and the use or disposal of such material. Excavation of material classified as "rock" shall conform to the requirements of Section 201 of the Standard Specifications.

- C. Rock Excavation for Structures and Trenches shall apply to the removal, use, or disposal of all boulders or other detached stones having a volume of 1/2 cubic yard or more. Excavation of such material shall conform Section 201 of the Standard Specifications.

D. Undercut Excavation

- 1. If unsuitable bearing materials are encountered at the required subgrade elevations notify the Engineer immediately.
- 2. Unstable bearing materials shall be removed to a depth of one foot below subgrade. Place geotextile stabilization fabric and one foot of graded aggregate base course, Type B.
- 3. Base course shall be placed and compacted in six-inch lifts.

E. Stability of Excavations

- 1. Slope sides of excavations to comply with local codes and ordinances having jurisdiction. Shore and brace where sloping is not possible because of space.
- 2. Maintain sides and slopes of excavations in a safe condition until completion of backfilling.

F. Shoring and Bracing

1. Provide materials for shoring and bracing, such as sheet piling, uprights, stringers and cross-braces, in good serviceable condition.
2. Establish requirements for trench shoring and bracing to comply with local codes and authorities having jurisdiction
3. Maintain shoring and bracing in excavations regardless of time period excavations will be open.
4. Brace, sheet, and support trench walls in such a manner that they will be safe and that the ground alongside the excavation will not slide or settle, and that all existing improvements of every kind, whether on public or private property, will be fully protected from damage.
5. In the event of damage to such improvements, immediately make all repairs and replacements necessary at no additional cost to the Owner.
6. Arrange bracing, sheeting and shoring so as to not place stress on any portion of the completed work until the general construction thereof has proceeded far enough to provide sufficient strength.
7. Exercise care in the drawing and removal of sheeting, shoring, bracing and timbering to prevent collapse and caving of excavation faces being supported.

G. Dewatering

1. Prevent surface water and subsurface or groundwater from flowing into excavations and from flooding the project site and surrounding area.
2. Do not allow water to accumulate in excavations. Remove water to prevent softening of foundation bottoms, undercutting footings, and soil changes detrimental to the stability of subgrades and foundations. Provide and maintain pumps, well points, sumps, suction and discharge lines, and other dewatering system components necessary to convey water from excavations.
3. Convey water removed from excavations and rainwater to collecting or runoff areas, which are not subject to erosion. Establish and maintain temporary drainage ditches and other diversions outside excavation limits for each structure. Do not use trench excavations as temporary drainage ditches.

H. Material Storage

1. Stockpile satisfactory excavated materials where directed until required for use as backfill or fill. Place, grade and shape stockpiles for proper drainage.
2. Locate and retain soil materials away from edge of excavations.
3. Dispose of excess soil material and waste materials as herein specified. Excavated material unsuitable for backfilling shall be kept separate from other materials excavated, and disposed of. Materials suitable for backfilling shall not be disposed of until completion of filling or backfilling operations.

I. Excavation for Pavements and Pavement Patches

1. Cut surface under pavements to comply with cross- sections, elevations and grades as shown.

J. Excavation for Trenches

1. Dig trenches to the uniform width required for the particular item to be installed sufficiently wide to provide ample working room. Trench width to a point no less than two feet (2') above the outside top of pipe shall be the pipe outer diameter plus twenty-four inches (24").
2. Excavate trenches to the depth indicated or required. Carry the depth of trenches for piping to establish the indicated flow lines and invert elevations. Beyond the building perimeter, keep bottoms of trenches for which elevations are not given sufficiently below finish grade to avoid freeze-ups.
3. Trenches for pipes shall not be opened more than the number of linear feet of pipe that can be placed and backfilled in one (1) day.
4. Grub roots and stumps within six inches (6") of outside surface of pipe bottom and sides to minimum depth of six inches (6") below grade. Backfill trenches with concrete where trench excavations pass within eighteen inches (18") of column or wall footings and which are carried below the bottom of such footings, or which pass under wall footings. Place concrete to the level of the bottom of adjacent footing.
5. Pipe bedding shall be as shown on the Plans.

K. Cold Weather Protection

1. Protect excavation bottoms against freezing when atmospheric temperature is less than thirty-five degrees (35°).

3.04 BACKFILL FILL AND COMPACTION

A. General

1. The project Inspector or Engineer shall be notified 24 hours in advance of any fill, backfill or compaction operations.
2. Place acceptable material in 8" lifts to required subgrade elevations.
3. Fills: Use suitable material (per Section 2.02 of this section) obtained from on-site excavation, except use borrow material when suitable on-site material is not available or when specified by the Engineer or shown on the Plans.
4. Backfilling: Use suitable material (per Section 2.02 of this section) obtained from on-site excavation, except use select backfill where indicated on Plans. Backfill to a height of two feet (2') above the top of pipe with earth free from stones, rock fragments, dirt clogs or frozen material greater than two inches (2") in largest dimension.
5. Do not provide additional off-site borrow material until all acceptable excavated materials on the site have been utilized in the work unless approved by the Engineer.
6. Place the various types of materials in the areas as designated on the Plans.

B. Backfill excavation as promptly as work permits, but not until completion of the following:

1. Inspection, testing, approval and recording locations of underground utilities.
2. Removal of concrete formwork.
3. Removal of shoring and bracing, and backfilling of voids satisfactory materials. Cut off temporary sheet piling driven below bottom of structures and remove in manner to prevent settlement of the structure or utilities, or leave in place if required.
4. Removal of trash and debris.

5. Permanent or temporary horizontal bracing is in place on horizontally supported walls.

C. Backfilling Prior to Approvals

1. Should any of the work be so enclosed or covered up before it has been approved, uncover all such work at no additional cost to the Owner.
2. After the work has been completely tested, inspected and approved, make all repairs and replacements necessary to restore the work to the condition in which it was found at the time of uncovering, all at no additional cost to the Owner.

D. Ground Surface Preparation Prior to Filling

1. Remove all vegetation, debris, topsoil, unsatisfactory soil materials, obstructions and deleterious materials from existing ground surface to a depth of not less than four inches (4") and not more than six inches (6") prior to placement of fills. Plow, strip or break-up sloped surfaces steeper than one (1) vertical to four (4) horizontal to a depth of not less than six inches (6") so that fill material will bond with existing surface.
2. When existing ground surface has a density less than that specified under "Compaction," for the particular area classification, break up the ground surface, pulverize, moisture condition to the optimum moisture content, and compact to required depth and percentage of maximum density.

E. Placement and Compaction

1. Place backfill materials in layers not more than eight inches (8") in loose depth.
2. Control soil compaction during construction providing minimum percentage of density specified for each area classification listed below.
3. Pavement areas are defined, for the purpose of this Section, as extending a minimum of five feet (5') beyond the building and/or pavement.
4. Compact soil to not less than the following percentages of maximum dry density for soils which exhibit a well-defined moisture density relationship determined in accordance with ASTM D-1557; and not less than the following percentages of relative density determined in accordance with ASTM D-2049, for soils which will not exhibit a well-defined moisture-density relationship.
 - a. Lawn or Unpaved Areas: Compact top six inches (6") of subgrade and each layer of backfill or fill material at 90 percent (90%) maximum dry density.
 - b. Walkways: Compact top six inches (6") of subgrade and each layer of backfill or full material at 95 percent (95%) maximum dry density or 90 percent (90%) relative dry density.
 - c. Pavement Areas: Compact top twelve inches (12") of subgrade and each layer of backfill or fill material at 95 percent (95%) maximum dry density or 90 percent (90%) relative dry density.
 - d. Base Course Materials: Compact each layer of base course material to 95 percent (95%) of maximum dry density.
 - e. Trench Stabilization Materials: Compact each layer of material to 95 percent (95%) of maximum dry density.
5. Moisture control:
 - a. Where subgrade or layer of soil material must be moisture conditioned before compaction, uniformly apply water to surface of subgrade, or layer of soil

material, to prevent free water appearing on surface during or subsequent to compaction operations.

- b. Remove and replace, or scarify and air dry, soil material that is too wet to permit compaction to specified density.
 - c. Soil material that has been removed because it is too wet to permit compaction may be stockpiled or spread and allowed to dry. Assist drying by discing, harrowing or pulverizing until moisture content is reduced to a satisfactory value.
 - d. Moisture condition fills materials to within 3 percent (3%) of the optimum moisture. Fill that is so wet that it is unstable under compaction equipment shall be dried and re-compacted to achieve a stable fill.
5. Puddling or jetting will not be permitted.
 6. Do not place backfill or fill material on surfaces that are muddy, frozen, or contain frost or ice, or other unsuitable materials.
 7. Place backfill and fill material evenly adjacent to structures, to be required elevations. Take care to prevent wedging action of backfill against structures by carrying the material uniformly around structure to approximately same elevation in each lift.
 9. Compact backfill to height of two feet (2') above top of pipe using approved flat-faced mechanical tampers.

3.05 GRADING

A. General

Uniformly grade areas within limits of grading under this section, including adjacent transition areas. Smooth finished surface within specified tolerances, compact with uniform levels or slopes between points where elevations are shown, or between such points and existing grades.

B. Grading Outside Building Lines

Grade areas adjacent to building lines to drain away from structures and to prevent ponding. Finish surfaces free from irregular surface changes, and as follows:

1. Lawn or unpaved areas: Finish area to receive topsoil to within not more than 0.10 feet above or below the required subgrade elevations.
2. Walks: Shape surface of areas under walks to line, grade and cross-section, with finish surface not more than 0.10 feet above or below the required subgrade elevation.
3. Pavement: Shape surface of areas under pavement line, grade and cross-section, with finish surface not more than 1/2 inch above or below the required subgrade elevation. All topsoil and other unsuitable material shall be removed and replaced with suitable backfill.

C. Compaction

1. After grading, compact subgrade surfaces to the depth and percentage of maximum density for each area classification.

D. Treating after Grading

1. After grading is completed, permit no further excavating, filling or grading.

2. Use all means necessary to prevent erosion of freshly graded areas during construction and until such time as permanent drainage and erosion control measures have been installed.

E. Subgrade Preparation

1. All subgrade preparation shall be performed in accordance with the applicable Sections of the Delaware Department of Transportation Standard Specifications except as may be modified by this Specification Section.
2. Subgrades for paving shall be firm and unyielding when proof-rolled in accordance with Section 202 of the Standard Specifications.

3.06 GRADED AGGREGATE BASE COURSE

A. General

1. Base Course consists of placing graded aggregate base course material in layers of specified thickness over subgrade surface to support pavements, pavement patches and structures, as shown on Plans.
2. Provide Base Course in accordance with Section 301 of the Standard Specifications, except as otherwise modified by this Specification Section.

B. Grade Control

1. During construction, maintain lines and grades including crown and cross-slope of base course.

C. Placing

1. Place base course material on prepared subgrade in layers of uniform thickness, conforming to indicated cross-section and thickness. Maintain optimum moisture content for compacting base course material during placement operations.
2. When a compacted base course is shown to be eight inches (8") or less, place material in a single layer. When shown to be more than eight inches (8") thick, place material in equal layers, except no single layer shall be more than eight inches (8") in thickness when compacted.
3. Spread, shape and compact all base course material deposited on the subgrade during the same day.

3.07 FIELD QUALITY CONTROL

- A. Quality control testing during construction. Allow testing service to inspect and approve subgrades and fill layers before further construction work is performed.
- B. If subgrade or fills which have been placed are below specified density, provide additional compaction and testing at no expense to the Owner. This shall include compaction and testing at areas initially tested and at other locations as directed.

3.08 MAINTENANCE

A. Protection of Graded Areas

1. Protect newly graded areas from traffic and erosion. Keep free of trash and debris.

2. Repair and establish grades in settled, eroded and rutted areas to specified tolerances.

B. Reconditioning Compacted Areas

1. Where completed compacted areas are disturbed by subsequent construction operations or adverse weather, scarify surface, reshape and compact to required density prior to further construction.

3.09 DISPOSAL OF EXCESS AND WASTE MATERIALS

- A. Remove waste materials, including excess and unacceptable excavated material, trash and debris, and dispose of it off the Owner's property.

3.10 TOPSOILING

A. Preparation

1. Verify that clearing, earthwork, grading and other preceding work affecting ground surface have been completed and that the area to be topsoiled is cleared, shaped, and dressed.
2. Preparation of Topsoil Subsoil
 - a. Shape and dress area to be topsoiled. This work includes grading to required lines and elevations; removal of all stones, clods, lumps two inches or larger in any dimension; removal of all wires, cables, pieces of concrete, tree roots, and debris or other unsuitable material.
 - b. Do not proceed with installation of topsoil until this work has been approved.

B. Installation

1. Place in even layers that will produce the minimum compacted thickness as indicated on the Plans.
2. If quantity of topsoil obtained from stripping is insufficient for the project requirements, provide required topsoil from approved sources located outside project limits.
3. Remove stones, lumps, roots and other objects larger than one inch in any dimension from graded topsoil surface.

C. Maintenance

1. Immediately before establishment of ground cover, re-topsoil and regrade areas, which become eroded or otherwise disturbed.
2. Perform all maintenance work in accordance with the Specifications without additional compensation.
3. Maintenance period to extend until installation of ground cover.

D. Cleaning

1. Immediately clean spills, soil, and conditioners on paved and finished areas.
2. Haul and dispose of topsoil in excess of the quantity required for the project off site.
3. Dispose of protective barricades and warning signs at termination of maintenance period.

PART 4 MEASUREMENT AND PAYMENT

4.1 METHOD OF MEASUREMENT

- A. No separate measurement or payment will be made for any earthwork needed to complete the work shown on the Plans or described herein except as noted in Section 4.1.B.
- B. Borrow Type "C" will be measured by the actual number of tons of Borrow Type "C" delivered, in place, and accepted. Certified weight slips signifying the weight of each load of materials delivered and placed shall be submitted to the Owner's Representative.

4.2 BASIS OF PAYMENT

- A. Borrow Type "C", measured as provided above, shall be paid for at the contract unit price per ton bid for this item, which price and payment shall constitute full compensation for supplying, installing, and compacting said materials, including all equipment, tools, labor, and incidentals necessary to complete the work. The unit price and payment shall also include the excavation and disposal off-site of any materials deemed unsuitable for backfill. No separate measurement or payment will be made for material removed.

END OF SECTION

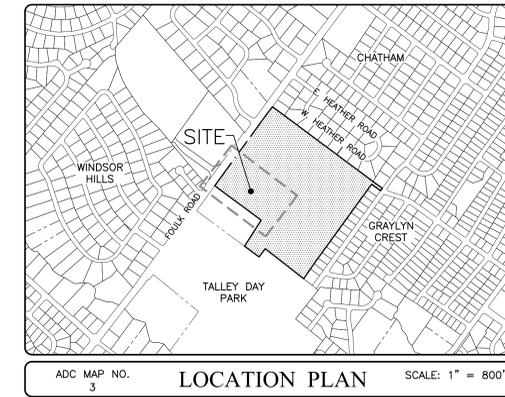
LEGEND	
EXISTING	PROPOSED
	BUILDING
	CONCRETE
	PAVEMENT MILL OVERLAY
	CURB
	CONCRETE WALL
	FENCE
	OVERHEAD ELECTRIC
	TRELLIS
	LIGHT POLE
	MANHOLE
	CATCH BASIN
	FIRE HYDRANT
	WATER VALVE
	WATER VAULT
	POST
	UTILITY POLE
	SINGLE TREE
	SIGN
	FLOW PATH
	N/A

CONSTRUCTION NOTES

- ALL CONSTRUCTION METHODS AND MATERIALS SHALL BE IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS OR CURRENT DELDOT STANDARD SPECIFICATIONS EXCEPT AS NOTED ON THIS PLAN.
- THE BIDDER IS REQUIRED TO EXAMINE CAREFULLY THE SITE OF THE WORK, THE PROPOSAL, PLANS, SPECIFICATIONS AND OTHER CONTRACT DOCUMENTS FOR THE WORK CONTEMPLATED AND IT WILL BE ASSUMED THAT THE BIDDER IS FAMILIAR AND SATISFIED AS TO THE CHARACTER, QUALITY AND QUANTITIES OF WORK TO BE PERFORMED AND MATERIALS TO BE FURNISHED, AND AS TO THE REQUIREMENTS OF THESE SPECIFICATIONS, PLANS AND OTHER CONTRACT DOCUMENTS, AND THE BIDDER MUST BE PREPARED TO EXECUTE A FINISHED JOB IN EVERY PARTICULAR WITHOUT ANY EXTRA CHARGE WHATSOEVER, EXCEPT AS MAY BE SPECIFICALLY PROVIDED FOR ELSEWHERE IN THESE CONTRACT DOCUMENTS.
- THESE DRAWINGS DO NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY. ALL CONSTRUCTION MUST BE DONE IN COMPLIANCE WITH THE OCCUPATIONAL SAFETY AND HEALTH ACT OF 1970 AND ALL RULES AND REGULATIONS THERETO APPURTENANT.
- THE CONTRACTOR SHALL ERECT SUFFICIENT BARRICADES AND TAKE NECESSARY SAFETY MEASURES TO PROTECT WORK AREAS. CONTRACTORS SHALL NOT DISRUPT DAILY OPERATIONS OR TRAFFIC FLOW WITHIN THE SITE EXCEPT WITH THE CONCURRENCE OF THE OWNER. A DETAILED MAINTENANCE OF TRAFFIC PLAN SHALL BE SUBMITTED TO THE OWNER 7 DAYS PRIOR TO THE START OF CONSTRUCTION.
- THE CONTRACTOR IS RESPONSIBLE TO FIELD VERIFY ALL EXISTING CONDITIONS, LAYOUT DIMENSIONS, AND CLEARANCES SHOWN ON THE DRAWINGS. ANY DISCREPANCIES WITHIN THE DRAWINGS, EXISTING FIELD CONDITIONS, SPECIFICATIONS, CODES OR REGULATIONS ARE TO BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO THE START OF WORK.
- THE CONTRACTOR SHALL PROTECT ALL ADJOINING AND NEARBY BUILDINGS, EQUIPMENT, UTILITIES, STRUCTURES, FENCES, TREES AND SHRUBBERY, ETC. FROM DAMAGE DUE TO EXCAVATION, DEMOLITION, AND CONSTRUCTION DURING THE ENTIRE CONSTRUCTION PERIOD. ANY DAMAGE CAUSED DIRECTLY OR INDIRECTLY WILL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.
- THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT ALL EXISTING UTILITIES AND MAINTAIN UNINTERRUPTED SERVICE. ANY DAMAGE DONE TO THEM DUE TO HIS NEGLIGENCE SHALL BE IMMEDIATELY AND COMPLETELY REPAIRED AT HIS EXPENSE.
- ALL MATERIAL STORAGE SHALL BE WITHIN THE PROPERTY BOUNDARIES AND NOT ON ADJOINING PROPERTIES.
- ALL EXCESS EXCAVATION AND ALL OLD PAVEMENT, BASE COURSE, BROKEN CONCRETE, ETC. SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE HAULED AWAY FROM THE SITE, UNLESS OTHERWISE APPROVED BY THE ENGINEER.
- ALL DISTURBED AREAS OUTSIDE OF PAVEMENT SHALL BE TOPSOILED WITH 6" TOPSOIL, SEEDING AND MULCHED. SEED MIXTURE SHALL MEET DELDOT SPECIFICATIONS FOR "PERMANENT GRASS SEEDING - SUBDIVISIONS."
- ALL HANDICAP PARKING SPACES, PAINT STRIPING AND APPLICABLE CIVIL STRUCTURES SHALL BE IN CONFORMANCE WITH THE STATE OF DELAWARE, ARCHITECTURAL ACCESSIBILITY BOARD STANDARDS.
- ALL PORTLAND CEMENT CONCRETE (PCC) FOR CURB, SIDEWALK, AND DRAINAGE STRUCTURES SHALL HAVE A COMPRESSIVE STRENGTH OF 3,000 PSI AFTER 28 DAYS UNLESS OTHERWISE NOTED.
- EROSION AND SEDIMENT CONTROL SHALL BE IN ACCORDANCE WITH THE LATEST REVISION OF THE DELAWARE EROSION AND SEDIMENT CONTROL HANDBOOK.

NOTES:

- OWNER: BRANDYWINE SCHOOL DISTRICT
1211 BRANDYWINE BLVD.
WILMINGTON, DE 19809
- SITE ADDRESS: 1400 FOULK ROAD
WILMINGTON, DE 19803
- MODIFIED GRID: 114/370
- TAX PARCEL NO.: 06-079.00-133
- SOURCE OF TITLE: DEED RECORD H-115-142
- ZONING: S - SUBURBAN
- AREA: 42.34± ACRES
- COUNCILMANIC DISTRICT: NO. 2
- SOURCE OF TOPOGRAPHY: AERIAL TOPOGRAPHY WAS PREPARED BY COOPER AERIAL SURVEYS CO., DATED OCTOBER 11, 2016. PARTIALLY UPDATED BY VANDERMAR & LYNCH, INC., THROUGH NOVEMBER 2016.
- DATUM: DELAWARE STATE PLANE - NAD 83
NATIONAL GEODETIC VERTICAL DATUM - NAVD 88
- WATER: CITY OF WILMINGTON
- SEWER: NEW CASTLE COUNTY



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Civil Engineers
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Wilmington, DE 19899

PROJECT
BSD - BRANDYWINE
HIGH SCHOOL
RENOVATIONS

1400 FOULK ROAD
WILMINGTON, DELAWARE 19803
OWNER
BRANDYWINE HIGH SCHOOL
1400 FOULK ROAD
WILMINGTON, DE 19803

3-24-17	ADDENDUM 1	
3-6-17	ISSUED FOR BIDS.GOV	
MARK	DATE	DESCRIPTION

PROJECT NO: 24370.00
FILE NAME: V&L NO. 24370.00-CONST-01
DRAWN BY: D. SHEEKY
CHECKED BY: S. ROSENFELD

SHEET TITLE
CONSTRUCTION PLAN

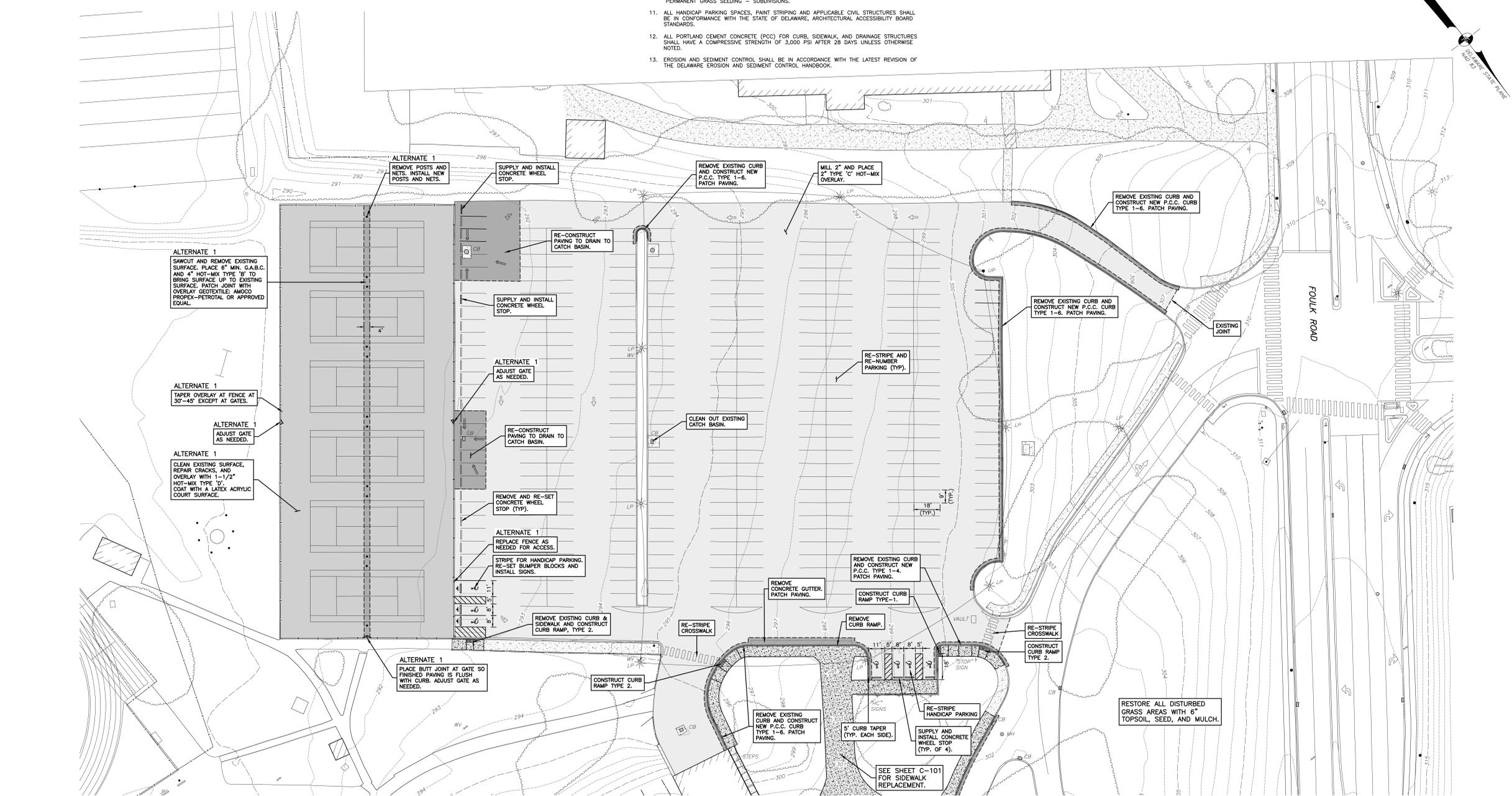
SCALE: 1" = 30'

SHEET INDEX	SHEET NO.
SHEET TITLE	C-100
SITE CONSTRUCTION PLAN	C-101
GRADING DETAILS	C-102
SITE CONSTRUCTION DETAILS	C-102

C-100

1 OF 3

24370.00-CONST-01



UTILITY NOTE:
EXISTING UTILITIES ARE SHOWN IN ACCORDANCE WITH THE BEST AVAILABLE INFORMATION. COMPLETENESS OR CORRECTNESS THEREOF IS NOT GUARANTEED. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR CONTACTING THE UTILITY COMPANIES INVOLVED TO SECURE THE MOST ACCURATE UTILITY LOCATION AND ELEVATION INFORMATION AVAILABLE. NO CONSTRUCTION AROUND OR ADJACENT TO UTILITIES SHALL BEGAIN WITHOUT NOTIFYING THEIR OWNERS AT LEAST TWO WORKING DAYS IN ADVANCE. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT THE EXISTING UTILITIES AND MAINTAIN UNINTERRUPTED SERVICE AND ANY DAMAGE DONE TO THEM DUE TO THE CONTRACTOR'S NEGLIGENCE SHALL BE IMMEDIATELY AND COMPLETELY REPAIRED AT THE CONTRACTOR'S EXPENSE. TO LOCATE EXISTING UTILITIES IN THE FIELD PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL CONTACT MISS UTILITY OF DELAWARE (TELEPHONE: 800-282-8555).

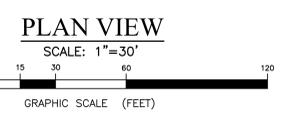
THE FOLLOWING UTILITIES HAVE BEEN IDENTIFIED BY MISS UTILITY (TICKET #162841042) AS HAVING UNDERGROUND FACILITIES IN THE AREA OF THIS PROJECT:

AT&T TRANSMISSION
VERIZON
DELAWARE POWER
DELAWARE POWER-GAS
DE DEPT OF NAT RESOURCES & ENV

COMCAST - UTILITIES
NEW CASTLE COUNTY SPECIAL SVC
DELAWARE STATE HWY DEPT
CITY OF WILMINGTON



BASE BID TO INCLUDE
2,500 S.Y. OF
ADDITIONAL PAVEMENT
PATCHING (SEE DETAIL).



PATCH PAVING, SIDEWALK, AND GRASS FOR ELECTRICAL CONDUITS. SEE SHEET E-131 FOR LOCATIONS. THE COST OF SUCH PATCHING SHALL BE INCLUDED IN THE LUMP SUM BASE BID AND IS NOT PART OF THE PAVEMENT PATCHING ALLOWANCE.

BASE BID SHALL INCLUDE SUPPLYING AND INSTALLING 250 TONS OF BORROW TYPE 'C'.

SEE SHEET C-102 FOR GENERAL CONSTRUCTION NOTES.

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PROJECT

BSD- BRANDYWINE
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RENOVATIONS

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OWNER

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3-24-17 ADDENDUM 1
3-6-17 ISSUED FOR BIDS.GOV

PROJECT NO: 24370.00
FILE NAME: V&L NO. 24370.00-CONST-01
DRAWN BY: D. SHEEKY
CHECKED BY: S. ROSENFELD

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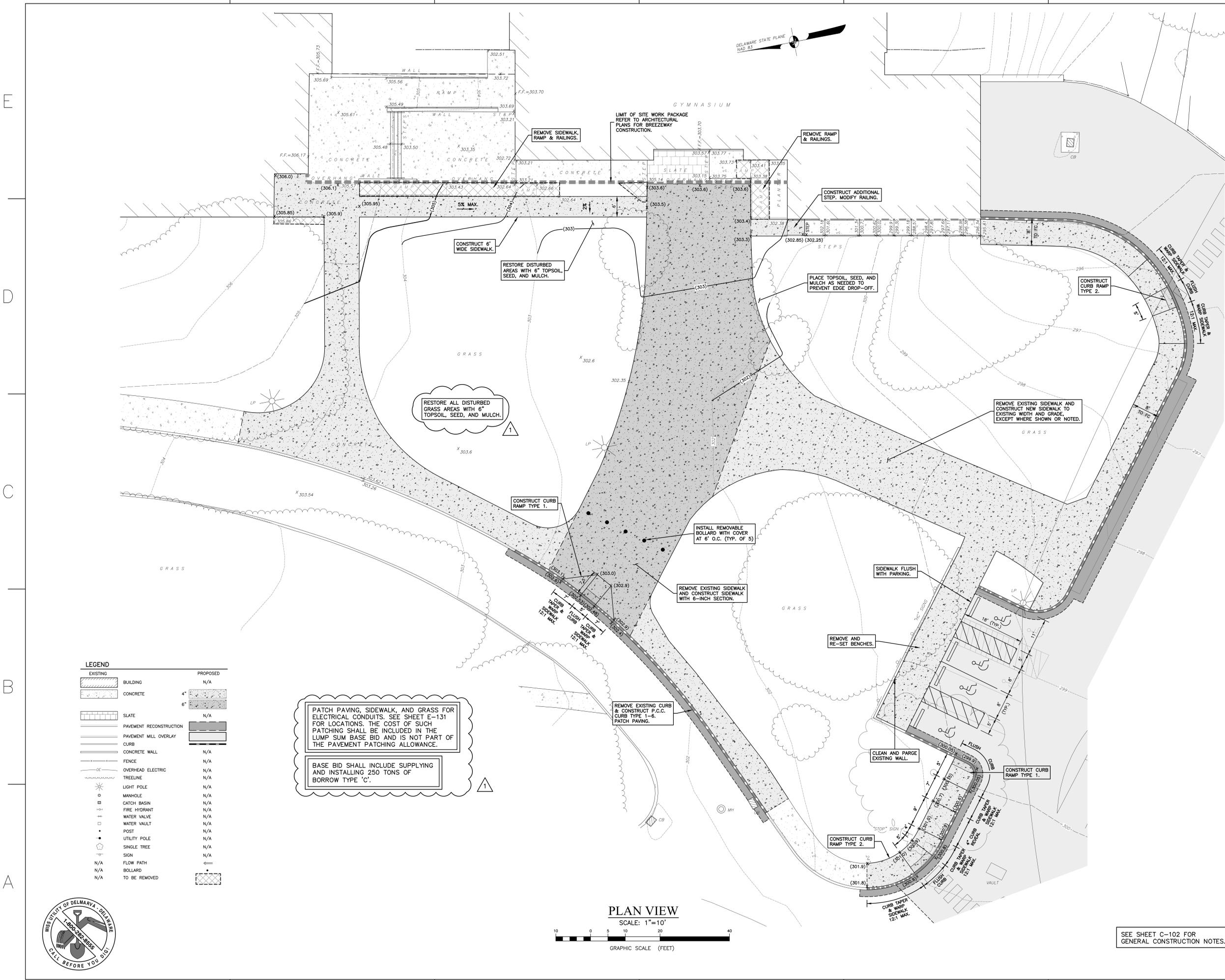
SHEET TITLE
GRADING DETAILS

SCALE: 1" = 10'

C-101

2 OF 3

24370.00-CONST-01



PATCH PAVING, SIDEWALK, AND GRASS FOR ELECTRICAL CONDUITS. SEE SHEET E-131 FOR LOCATIONS. THE COST OF SUCH PATCHING SHALL BE INCLUDED IN THE LUMP SUM BASE BID AND IS NOT PART OF THE PAVEMENT PATCHING ALLOWANCE.

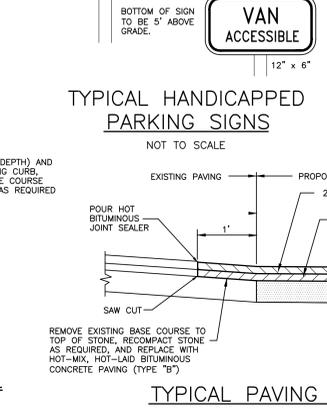
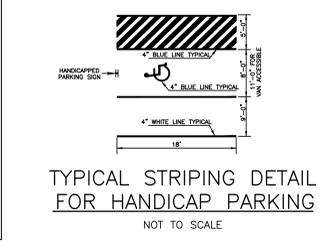
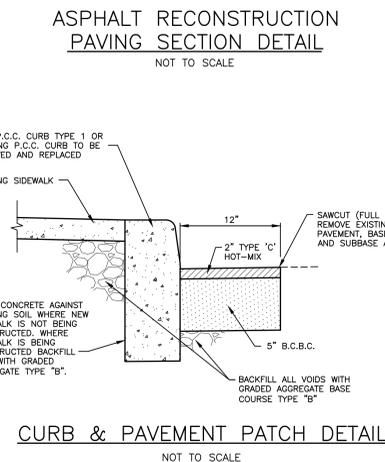
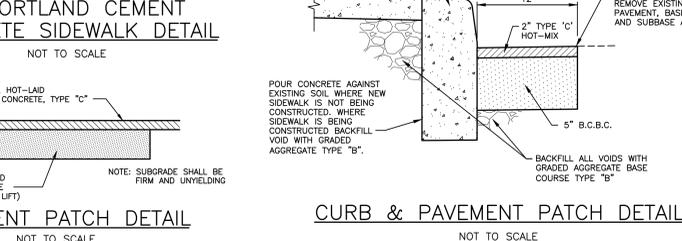
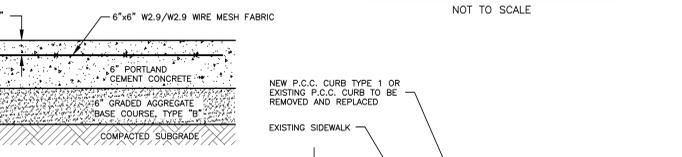
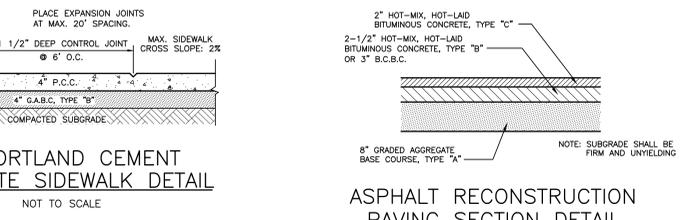
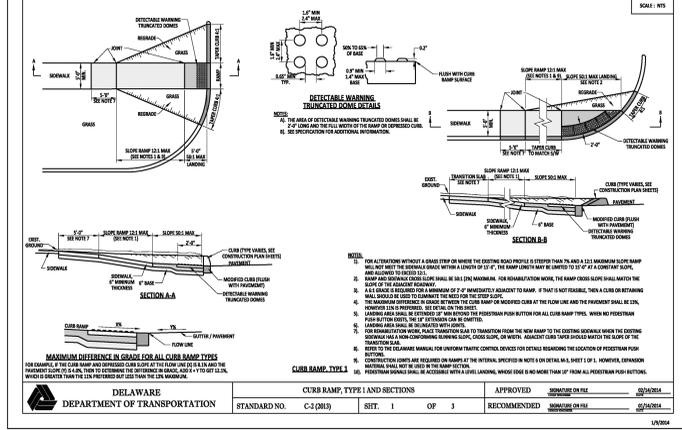
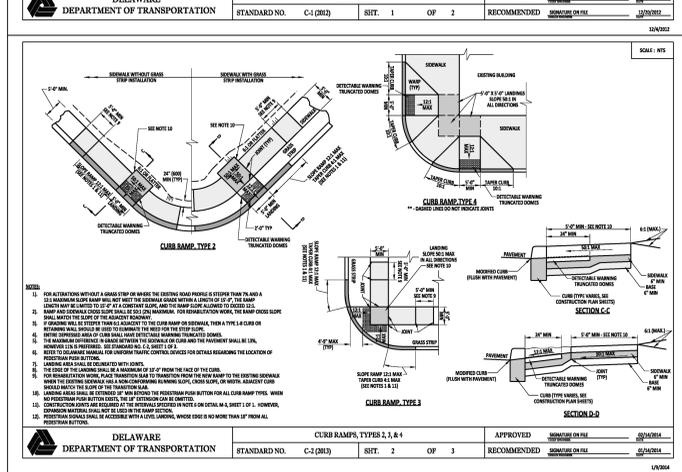
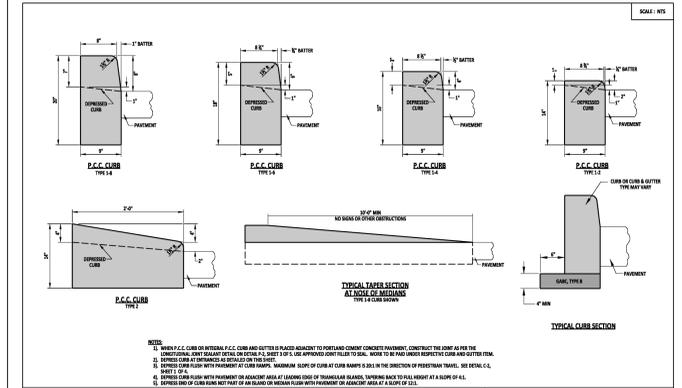
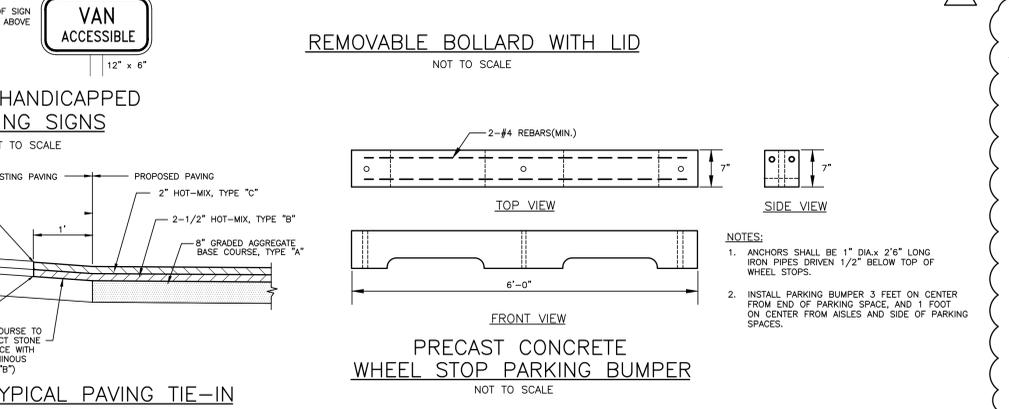
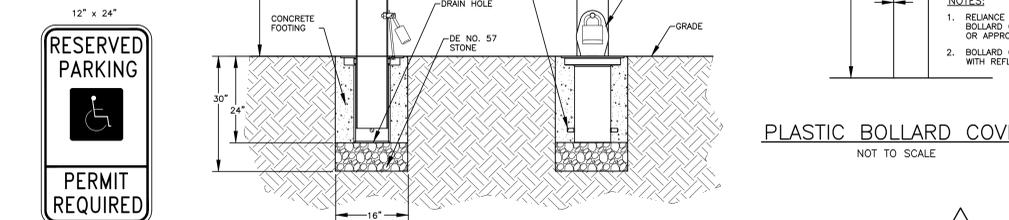
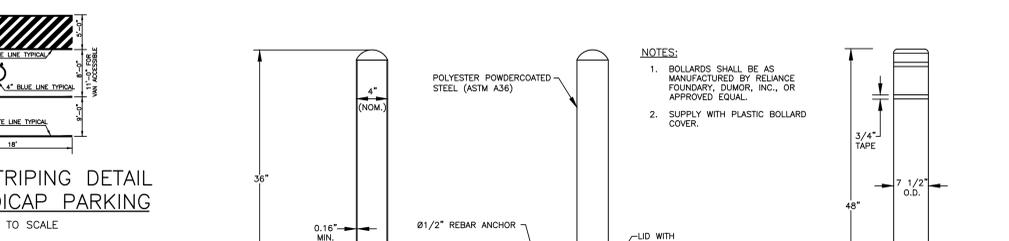
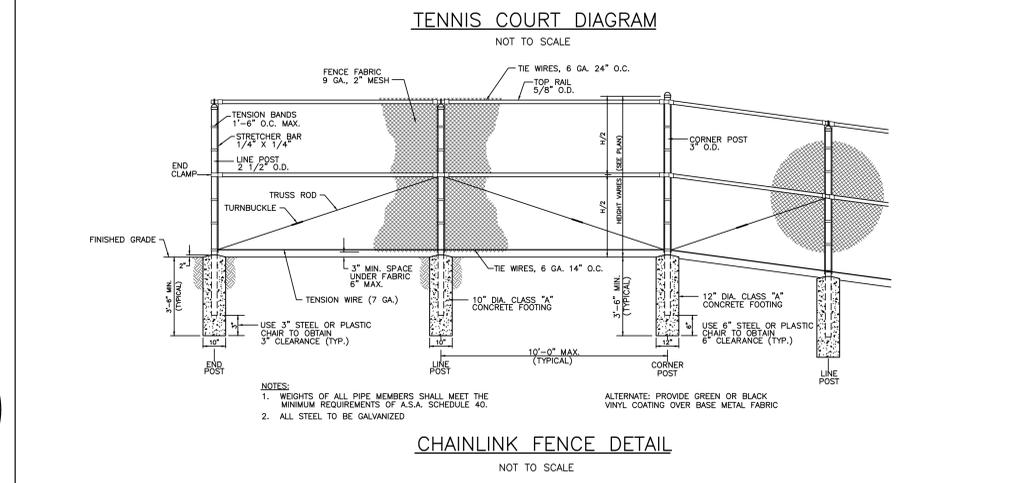
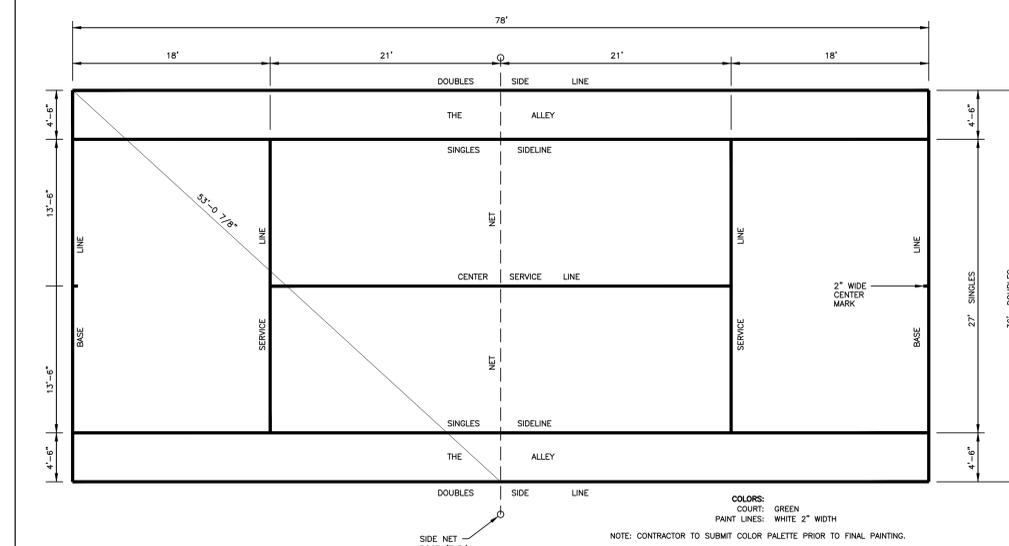
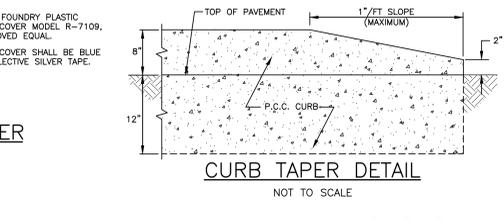
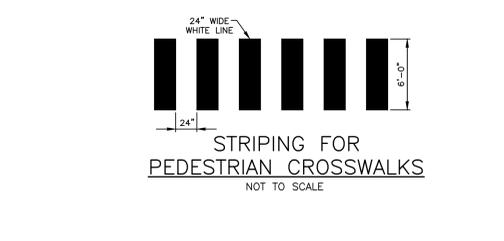
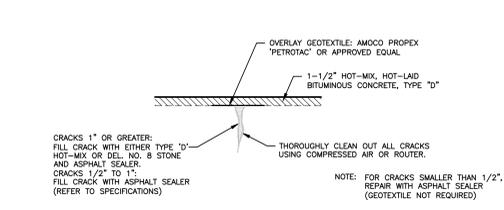
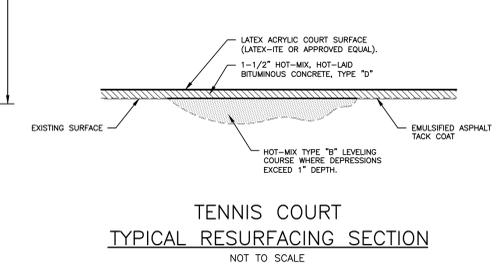
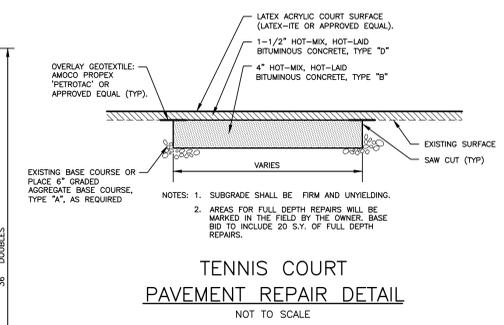
BASE BID SHALL INCLUDE SUPPLYING AND INSTALLING 250 TONS OF BORROW TYPE 'C'.

PLAN VIEW
SCALE: 1"=10'
GRAPHIC SCALE (FEET)

SEE SHEET C-102 FOR GENERAL CONSTRUCTION NOTES.



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PROJECT
BRANDYWINE
SCHOOL DISTRICT
BRANDYWINE HIGH SCHOOL

OWNER

1	03/20/2017	ADDENDUM #1
MARK	DATE	DESCRIPTION
PROJECT NUMBER: 16.029		
FILE NAME:		
DRAWN BY: DMG		
CHECKED BY: SAJ		

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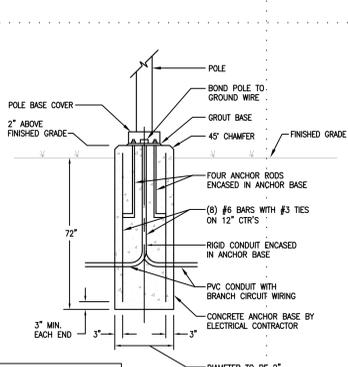
SHEET TITLE
SITE PLAN
ELECTRICAL

E-131

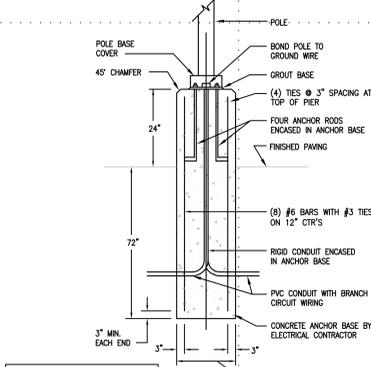


16.109

TYPE	DESCRIPTION	LAMP	MANUFACTURER	CATALOG NUMBER	VOLTS	CONE	APPR. SIZE	MOUNTING				NOTES
								POLE	FINISH	RECESS	DEPTH	
A	POLE FIXTURE	107W LED	GARDDO	ECF-1-1-2-100LA-6453-NW-BRP-IS	208V			30"-0" SQUARE	BRONZE			LED POLE FIXTURE WITH TYPE 2 DISTRIBUTION.
B	POLE FIXTURE	107W LED	GARDDO	ECF-1-1-4-105LA-321A-NW-BRP-IS	208V			30"-0" SQUARE	BRONZE			SIMILAR TO TYPE "A" EXCEPT TYPE 4 DISTRIBUTION.
C	POLE FIXTURE	107W LED	GARDDO	ECF-2-3-105LA-321A-NW-BRP	208V			30"-0" SQUARE	BRONZE			SIMILAR TO TYPE "A" EXCEPT TYPE 3 DISTRIBUTION AND (2) FIXTURES MID AT 180°.
D	POLE FLOOD LIGHT	139W LED	GARDDO	FX2160CZHRMNA3HN	208V				BRONZE			MID ON COMMON POLE W/ SITE LIT. HW FIXTURE TOWARD STORAGE ON FRONT OF BUILDING. PROVIDE ARM MOUNT OPTION.
E	CANOPY FIXTURE	55W LED	GARDDO	SFC-3-55LA-NW-UNV-NP-DL	120V							SURFACE MTD LED CANOPY LIGHT, 4.5" DEEP # 16" SQUARE



CONCRETE STRENGTH TO BE 4500 PSI WITH A MAXIMUM WATER/CEMENT RATIO OF .45 AND 6% AIR-ENTRAINMENT



CONCRETE STRENGTH TO BE 4500 PSI WITH A MAXIMUM WATER/CEMENT RATIO OF .45 AND 6% AIR-ENTRAINMENT

REINFORCED ANCHOR BASE FOR FIXTURES IN GRASS AREAS
NOT TO SCALE

REINFORCED ANCHOR BASE FOR FIXTURES IN PAVED AREAS
NOT TO SCALE

GENERAL SHEET NOTES:

- CONTRACTOR TO COORDINATE WITH LOCAL POWER COMPANY FOR THE REMOVAL OF THE EXISTING SITE LIGHT AND EXISTING POLES.
- CONTRACTOR RESPONSIBLE FOR ALL TRENCHING AND BACK FILLING FOR ALL WORK ASSOCIATED WITH NEW CONDUIT RUNS. RETURN TRENCH BACK TO ORIGINAL CONDITION.
- CONTRACTOR TO PROVIDE TIME CLOCK OF TYPE TORQ RATED 208V-SPOT, WITH BUZZER TYPE PHOTOCELL MOUNTED ON EXTERIOR WALL IN WEATHERPROOF BOX. MAKE ALL FINAL CONNECTIONS.
- CONTRACTOR TO DISCONNECT AND REMOVE (8) EXISTING SOW METAL HALIDE DOWN LIGHTS COMPLETE IN BREEZEWAY. WIRING TO REMAIN AND BE REUSED. PROVIDE STEEL PLATE TO COVER HOLE, PAINT TO MATCH CEILING PROVIDE (8) NEW TYPE "E" FIXTURES AND CONNECT BACK TO ORIGINAL CIRCUIT AND CONTROL.
- CONTRACTOR TO DISCONNECT AND REMOVE (4) EXISTING SOW METAL HALIDE DOWN LIGHTS COMPLETE AT CANOPY. WIRING TO REMAIN AND BE REUSED. PROVIDE STEEL PLATE TO COVER HOLE, PAINT TO MATCH CEILING PROVIDE (5) NEW TYPE "E" FIXTURES AND CONNECT BACK TO ORIGINAL CIRCUIT AND CONTROL.
- ALL HOME RUNS TO PANELS VIA ELECTRONICALLY HELD CONTACTORS OF TYPE SQUARE D CLASS 8000. PROVIDE (4) 2-POLE AT LOCAL PANELS. CONTACTORS TO BE MOUNTED IN NEMA-1 ENCLOSURES. COORDINATE WITH OWNER'S CONTROL CONTRACTOR TO-WH AND PAY FOR ALL COSTS FOR ASSOCIATED WORK TO CONTROL SITE LIGHTING REMOTELY.
- CONTRACTOR TO DISCONNECT AND REMOVE ALL EXISTING POLE LIGHTING COMPLETE. REMOVE CONCRETE BASES. CONDUIT TO BE CUT BELOW GRADE AND ABANDONED.
- CONTRACTOR TO COORDINATE WITH LOCAL POWER COMPANY TO DISCONNECT AND REMOVE EXISTING SERVICE TO EXISTING SIGN COMPLETE.
- CONTRACTOR TO COORDINATE WITH LOCAL POWER COMPANY TO DISCONNECT AND REMOVE EXISTING SERVICE, POLES AND LIGHTING AT THE ENTRANCE AND AT STUDENT PARKING LOT COMPLETE. RESTORE AREA BACK TO ORIGINAL CONDITION.

CONDUIT AND WIRE SCHEDULE

MINIMUM SIZE WIRE AND CONDUIT SHALL BE 1-1/4" PVC CONDUIT AND #10 WIRING UNLESS OTHERWISE INDICATED

- ① 2#6 +#8 GND IN A 1-1/4" PVC CONDUIT.
- ② 2#8 +#10 GND IN A 1-1/4" PVC CONDUIT.
- ③ 2#10 +#10 GND IN A 1-1/4" PVC CONDUIT.
- ④ (2) 2#1 +#8 GND IN A 1-1/4" PVC CONDUIT.

ELECTRICAL SPECIFICATIONS

- ALL WORK SHALL COMPLY WITH ALL APPLICABLE CODES, ORDINANCES, AND RULES AND REGULATIONS IN EFFECT. THE NATIONAL ELECTRICAL CODE SHALL REPRESENT THE MINIMUM REQUIREMENTS. THE CONTRACTOR SHALL ARRANGE AND PAY FOR ALL PERMITS, TESTS AND INSPECTIONS REQUIRED. FURNISH CERTIFICATE OF INSPECTION TO THE OWNER AT TIME OF COMPLETION.
- PROVIDE ALL LABOR, MATERIALS, EQUIPMENT AND SUPERVISION NECESSARY TO INSTALL A COMPLETE AND OPERATING ELECTRICAL SYSTEM AS INDICATED ON THE DRAWINGS AND AS SPECIFIED HEREIN.
- INSTALL ALL WORK IN A NEAT AND WORKMANLIKE MANNER. CUTTING AND PATCHING SHALL BE PERFORMED BY SKILLED TRENCHMEN NORMALLY EMPLOYED FOR THE WORK INVOLVED.
- PROVIDE ALL REQUIRED TESTS TO ASSURE THAT ALL SYSTEMS ARE FREE OF GROUNDS, OPENS AND SHORTS.
- ALL LABOR AND MATERIALS SHALL BE GUARANTEED TO BE FREE FROM DEFECTS FOR A PERIOD OF ONE YEAR OF OPERATION FROM DATE OF ACCEPTANCE BY THE OWNER.
- THE INTERPRETATION OF THE OWNER'S REPRESENTATIVE WILL BE FINAL IN THE EVENT THERE IS A LACK OF UNDERSTANDING OF THE FULL SCOPE OR REQUIREMENTS OF THE SYSTEMS UNDER THIS CONTRACT.
- ALL SERVICE INTERRUPTIONS TO THE ELECTRIC OR RELATED SYSTEMS, WHETHER DURING REGULAR WORKING HOURS OR AT ANY OTHER TIME, MUST BE COORDINATED WITH THE OWNER'S REPRESENTATIVE IN WRITING AHEAD OF TIME. ALL SUCH INTERRUPTIONS SHALL BE SO SCHEDULED AND PLANNED AS TO REQUIRE A MINIMUM OF TIME AND SHALL ONLY OCCUR ONLY DURING A MUTUALLY SATISFACTORY PERIOD.
- FASTENING OF EQUIPMENT, ETC. TO THE BUILDING CONSTRUCTION SHALL BE BY USE OF APPROVED LEAD SHEATHED EXPANSION BOLTS FOR MASONRY CONSTRUCTION OR A J-HOOK, LOCK WASHER AND NUT FOR NON-MASONRY CONSTRUCTION.
- FURNISH AND INSTALL ALL REQUIRED SUPPORTS AND HANGERS FOR EQUIPMENT. CONDUITS, DUCTS AND WIRWAYS SHALL BE PROPERLY SUPPORTED TO PREVENT SAG OR STRAIN. ALL CLASS 2 WIRING SPLICES, JUNCTIONS AND TERMINATIONS SHALL BE INSTALLED IN METALLIC BOXES.
- THE WORK OF ALL TRADES SHALL BE COORDINATED. NECESSARY OFFSETS TO ALLOW CLEARANCE, HEADROOM OR AVOID INTERFERENCE SHALL BE PROVIDED.
- SUBMIT SIX (6) COPIES OF SHOP DRAWINGS ON EACH PIECE OF EQUIPMENT TO THE OWNER'S REPRESENTATIVE FOR APPROVAL. CONTRACTOR SHALL KEEP ONE COPY OF APPROVED SHOP DRAWINGS AT THE JOB SITE.
- SUBSTITUTION OF AN EQUAL OR BETTER PRODUCT OTHER THAN THAT SPECIFIED SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW. THE ENGINEER'S DECISION TO ACCEPT OR REJECT SHALL BE FINAL.
- CONTRACTOR SHALL VISIT THE JOB SITE TO DETERMINE WHAT EXISTING CONDITIONS WILL BE ENCOUNTERED. SUBMITTAL OF A PROPOSAL SHALL INDICATE THAT THE CONTRACTOR IS AWARE OF ALL EXISTING CONDITIONS.
- EXCAVATION SHALL BE OF THE OPEN-TRENCH METHOD AND TO THE DEPTHS AND WIDTHS AS MAY BE NECESSARY. THE CONTRACTOR SHALL DO ALL EXCAVATION REQUIRED IN CONNECTION WITH HIS WORK. BOTTOMS OF TRENCHES SHALL BE EXCAVATED TO A UNIFORM GRADE. ALL MATERIALS EXCAVATED SHALL BE DEPOSITED ON THE SIDE OF THE TRENCHES AND BEYOND THE REACH OF THE SLIDES. EXCAVATED MATERIAL SHALL NOT BE PILED WHERE IT WILL INTERFERE WITH TRAFFIC.
- AFTER WORK IN TRENCHES HAS BEEN COMPLETED, THEY SHALL BE FILLED WITH GOOD, CLEAN, FINE GARTH IN 8" LAYERS AND SHALL BE PNEUMATICALLY TAMPED BEFORE THE NEXT LAYER OF MATERIAL HAS BEEN FILLED IN. THE BACKFILL SHALL BE FREE OF EXCAVATED ROCK, CINDERS, STONES, BRICKBATS OR OTHER DEBRIS. RESTORE GRASS AREA TO ORIGINAL CONDITION.
- PROVIDE PERMANENT IDENTIFICATION LABELS ON ALL NEW ELECTRICAL EQUIPMENT.
- THE DRAWINGS AND NOTES INDICATE THE MAJOR ITEMS OF WORK TO BE INCLUDED IN THIS CONTRACT, BUT THIS CONTRACT SHALL INCLUDE THE REMOVAL, RELOCATION, REPAIR, AND RENOVATION OF ANY CONDUIT, WIRE, BOXES, FIXTURES, ETC., EXPOSED OR CONCEALED IN THE EXISTING BUILDING WHICH WILL INTERFERE WITH THE WORK OF THIS CONTRACT.
- DEMOLITION WORK AT ALL TIMES SHALL BE SUBJECT TO THE DIRECTION AND APPROVAL OF THE OWNER'S REPRESENTATIVE AND IT SHALL BE CARRIED ON IN SUCH A MANNER AS NOT TO INTERFERE WITH THE OPERATION OF THE SYSTEMS. THE CONTRACTOR SHALL COOPERATE WITH THE OWNER'S REPRESENTATIVE DURING DEMOLITION SO THAT MATERIALS ARE PROMPTLY REMOVED AS THEY ARE UNCOVERED.
- BRANCH WIRING CONNECTIONS TO ALL LIGHTING FIXTURES, SWITCH AND RECEPTACLE DEVICES AND POWER WIRING CONNECTIONS TO ALL MOTORS AND ELECTRICALLY OPERATED EQUIPMENT SHALL BE INSTALLED IN ELECTRICAL METALLIC TUBING (EMT).
- RACEWAYS SHALL BE RIGID STEEL CONDUIT, INTERMEDIATE METAL CONDUIT, ELECTRICAL METALLIC TUBING, PVC CONDUIT FOR UNDERGROUND AND FLEXIBLE GALVANIZED STEEL FOR LIGHTING FIXTURE CONNECTION. MINIMUM SIZE CONDUIT SHALL BE 3/4".
- JUNCTION BOXES SHALL BE GALVANIZED SHEET STEEL AND PRESS STEEL BOXES WITH AMPLE SIZE AS REQUIRED BY N.E.C. WITH SCREW COVERS.
- WEATHERPROOF OUTLET BOXES SHALL HAVE SPRING-HINGED WATERPROOF COVER SUITABLY CONFIGURED FOR EACH APPLICATION, INCLUDING FACE PLATE GASKETS AND CORROSION-RESISTANT FASTENERS. BOXES AND DEVICES SHALL BE RECESSED, WEATHERPROOF WITH SMOKE OPAQUE IN-USE COVERS. INTERMATIC CAT. #WP1000(V)GRC OR APPROVED EQUAL.
- ALL CONDUCTORS SHALL BE COPPER WITH 600-VOLT THERMOPLASTIC MOISTURE RESISTANT INSULATION, SOLID #10 AND SMALLER, STRANDED #8 AND LARGER. MINIMUM WIRE SIZE #12 AWG. MC WIRING IS ACCEPTABLE FOR CONCEALED BRANCH CIRCUITING.
- BRANCH CIRCUITING CABLES SHALL BE FACTORY COLOR CODED, AND SHALL MATCH ESTABLISHED PHASE COLORS WHERE APPLICABLE.
- MOLDED CASE CIRCUIT BREAKERS SHALL BE FACTORY ASSEMBLED, MOLDED CASE CIRCUIT BREAKERS OF FRAME SIZE INDICATED. 240 VOLT, 60 HZ, ONE, TWO OR THREE POLES. BREAKER TO HAVE PERMANENT THERMAL INSTANTANEOUS MAGNETIC TRIPS IN EACH POLE WITH AMPERE RATINGS AS INDICATED. PROVIDE CIRCUIT BREAKERS TO MATCH EXISTING PANEL MANUFACTURER ON SITE, AL/CU RATED, AS MANUFACTURED BY SQUARE D, SIEMENS, CUTLER HAMMER, OR APPROVED EQUAL.

A3 SITE PLAN - ELECTRICAL
SCALE: 1" = 50'-0"

