

SITE DATA

- OWNER OF RECORD: RED CLAY CREEK CONSOLIDATED SCHOOL DISTRICT (MARCIN MICHALSKI)
1502 SPRUCE AVENUE
WILMINGTON, DE 19805
(302) 892-3284
- ENGINEER / SURVEYOR: BECKER MORGAN GROUP INC.
250 SOUTH MAIN STREET, SUITE 109
NEWARK, DE 19711
(302) 369-3700
- PROPERTY MAP NUMBER: 0704240179
- ZONING CLASSIFICATION: EXISTING: S (SUBURBAN) / SCHOOL
PROPOSED: S (SUBURBAN) / SCHOOL
- DEED SUMMARY: N/A
- NUMBER OF LOTS: EXISTING: 1
PROPOSED: 1
- PRESENT USE: HIGH SCHOOL
- PROPOSED USE: HIGH SCHOOL
- TOTAL SITE AREA: 19.73 ACRES ±
- EXISTING BUILDING: FOOTPRINT: 88,175 S.F. ±
ACCESSORY: 5,682 S.F. ±
NO CHANGES TO PARKING REQUIRED:
GRADES 6-8: 2 / CLASSROOM X 23 = 46 SPACES
GRADES 9-12: 10 / CLASSROOM X 36 = 360 SPACES
PUBLIC ASSEMBLY: 0.75 / 1,000 S.F. X 7,336 = 56 SPACES
TOTAL REQUIRED = 462 SPACES
- PARKING CALCULATIONS: EXISTING: FRONT LOT = 25 SPACES
REAR LOT = 242 SPACES
TOTAL = 267 SPACES
PROPOSED: NONE PROPOSED
HANDICAP SPACES: 7 REQUIRED (1 VAN)
11 EXISTING (4 VAN)
BICYCLE PARKING: 20 REQUIRED
20 EXISTING
- BULK AREA STANDARDS: S (SUBURBAN) / SCHOOL
STREET: 40 FT.
SIDE: 25 FT.
REAR: 40 FT.
PAVING STREET / OTHER YARD: 20 FT. / 10 FT.
LOT AREA (MIN.): 40 FT.
LOT WIDTH (MIN.): 100 FT.
MIN. SITE AREA: 1 ACRE
MIN. OS/RSLSR: 0.50
- TRACT AREA CALCS: EXISTING: BUILDING: 2.15 ACRES
IMPERVIOUS: 5.33 ACRES
OPEN SPACE: 12.25 ACRES
TOTAL: 19.73 ACRES
PROPOSED: BUILDING: 2.15 ACRES
IMPERVIOUS: 5.33 ACRES
OPEN SPACE: 12.23 ACRES
TOTAL: 19.73 ACRES
- RIGHT-OF-WAY: JASKSON AVENUE: 50' ROW LOCAL ROAD
VICTORIA AVENUE: 50' ROW LOCAL ROAD
MARION PLACE: 50' ROW LOCAL ROAD
BOXWOOD ROAD: 60' ROW MINOR ARTERIAL
- BUILDING HEIGHT: PERMITTED: 45 FT. (MAX.)
PROPOSED: NONE PROPOSED
- SOURCE OF WATER: ARTESIAN WATER COMPANY, INC.
- SURVEY BENCHMARK: PUBLIC - NEW CASTLE COUNTY
FOUND P.K. NAIL
VERTICAL: NAVD88
HORIZONTAL: NAD83 (2011)
- MONUMENTATION: EXISTING: 0 FOUND
PROPOSED: 3 SET
- BENCHMARK LAT. / LONG.: N39° 43' 26.17" / W75° 36' 05.60"
- TOTAL DISTURBED AREA: 5.50 ACRES ±
EXISTING: 2
PROPOSED: 0
- FIRE HYDRANTS: EXISTING: 2
PROPOSED: 0

LEGEND

ITEM	EXISTING	PROPOSED
SANITARY GRAVITY SEWER LINE, SIZE & FLOW DIRECTION	EX. 10" S	10" S
SANITARY SEWER FORCE MAIN, SIZE & FLOW DIRECTION	EX. 10" F.M.	12" F.M.
SANITARY SEWER MANHOLE (S.D.M.H.)	EX. 10"	10"
SANITARY SEWER CLEANOUT	EX. 10" W	10" W
WATER MAIN & SIZE	EX. 10" W	12" W
FIRE HYDRANT	F.H.	F.H.
WATER VALVE (W.V.) OR METER (W.M.)	W.M. / W.V.	W.M. / W.V.
STORM DRAIN MANHOLE (S.D.M.H.)	EX. 10"	10"
STORM DRAIN LINE (CMP OR RCP)	EX. 10" S	10" S
CATCH BASIN	EX. 10"	10"
UTILITY POLE W/ OVERHEAD SERVICE (TELEPHONE OR ELECTRIC OR BOTH)	EX. 10"	10"
UNDERGROUND ELECTRIC	U.E.	U.E.
UNDERGROUND TELEPHONE	U.T.	U.T.
UNDERGROUND GAS MAIN	EX. 2" G	2" G
PAVEMENT TO BE REMOVED	NA	NA
CONCRETE CURB & GUTTER	NA	NA
CONCRETE SIDEWALK, SLAB PAVING	NA	NA
IMPERVIOUS SURFACED ROAD, DRIVE OR LOT	NA	NA
INDIVIDUAL TREE OR BUSH	EVERGREEN / DECIDUOUS	EVERGREEN / DECIDUOUS
WIRE FENCE	EX. 10"	10"
CHAINLINK FENCE	EX. 10"	10"
STOCKADE FENCE	EX. 10"	10"
STRUCTURE (CONCRETE, WOOD, METAL, ETC.)	EX. 10"	10"
DRAINAGE DITCH OR SWALE	EX. 10"	10"
EMBANKMENT SIDESLOPES (DOWN)	EX. 10"	10"
CONTOUR	EX. 10"	10"
ELEVATION SPOT SHOT	EX. 10"	10"
BENCH MARK	EX. 10"	10"
PROPERTY OR RIGHT-OF-WAY LINE	EX. 10"	10"
CENTRELINE	EX. 10"	10"
LIGHT POLE	EX. 10"	10"
CONSTRUCTION NOTE	EX. 10"	10"

GENERAL NOTES:

- BOUNDARY AND TOPOGRAPHIC SURVEY DATA SHOWN HEREON WAS PREPARED BY BECKER MORGAN GROUP, DOVER, DE, IN MARCH OF 2017. VERTICAL DATUM IS BASED ON NAVD 88. HORIZONTAL DATUM IS BASED ON DELAWARE STATE PLANE MAD 93 (2011).
- THE EXISTING UTILITIES SHOWN WERE TAKEN FROM THE BEST AVAILABLE RECORDS. THE CONTRACTOR SHALL CONTACT MISS UTILITY OF DELMARVA (1-800-282-8555) TO VERIFY THEIR EXACT LOCATION PRIOR TO THE START OF ANY CONSTRUCTION. ANY DAMAGE INCURRED TO ANY UTILITIES SHALL BE REPAIRED IMMEDIATELY AT THE CONTRACTOR'S EXPENSE. IF THE CONTRACTOR RELIES ON THE UTILITY LOCATIONS SHOWN HEREON, HE DOES SO AT HIS OWN RISK AND WILL NOT BE ENTITLED TO ADDITIONAL COMPENSATION DUE TO TIME DELAYS FROM SAID RELIANCE.
- NO TITLE EXAMINATION FURNISHED TO OR PERFORMED BY THE PREPARERS HEREOF. PROPERTY SHOWN HEREON IS SUBJECT TO ANY RIGHT-OF-WAY, EASEMENTS, RESTRICTIONS, ETC. AS MAY BE SHOWN OR NOTED IN ANY RECORD, PUBLIC OR OTHERWISE, OR ANY REQUIREMENT OR REGULATION OF ANY PUBLIC AGENCY.
- THE BOUNDARY LINES PORTRAYED HEREON HAVE BEEN ESTABLISHED BASED SOLELY ON PHYSICAL EVIDENCE DISCOVERED IN THE FIELD IN CONJUNCTION WITH DETERMINATIONS DERIVED FROM SOURCE OF TITLE AND ADJACENT DEED RECORD INFORMATION.
- DELAWARE REGULATIONS PROHIBIT THE BURIAL OF CONSTRUCTION DEMOLITION DEBRIS, INCLUDING TREES AND STUMPS ON CONSTRUCTION SITES. ANY SOLID WASTE FOUND DURING EXCAVATION MUST BE REMOVED AND PROPERLY DISCARDED IN ACCORDANCE WITH ALL FEDERAL, STATE AND LOCAL REGULATIONS.
- ALL HANDICAPPED PARKING DEMARCATION, STALLS, AND BUILDING ACCESSIBLE ROUTES SHALL COMPLY WITH THE "AMERICAN WITH DISABILITIES ACT".
- THIS DRAWING DOES NOT INCLUDE NECESSARY COMPONENT 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.
- THIS SITE IS NOT LOCATED WITHIN THE 100 YEAR FLOOD PLAIN AS DEPICTED ON FIRM MAP 10003C0151J, PAGES 51 OF 475 OF NEW CASTLE COUNTY, DELAWARE, DATED JANUARY 17, 2009.
- THE SITE IS NOT LOCATED WITHIN A WATER RESOURCE PROTECTION AREA (WRPA) BASED ON REVIEW OF WATER RESOURCE PROTECTION AREAS (WRPAs) MAP 1 OF 3, DATED 1993, REVISED MAY 2001, FEBRUARY 2006, DECEMBER 2011 AND MARCH 2017 FOR NEW CASTLE COUNTY.
- ENVIRONMENTAL CONSULTANT SERVICES, INC. CONDUCTED A WETLAND INVESTIGATION ON MARCH 27, 2003 AND CONCLUDED THAT WETLANDS ARE NONEXISTENT.
- THE SITE IS NOT LOCATED WITHIN A CRITICAL NATURAL AREA AS BASED UPON REVIEW OF THE CURRENT STATE INVENTORY OF NATURAL RESOURCES MAPS BY THE DELAWARE DEPARTMENT OF NATURAL RESOURCES AND ENVIRONMENTAL CONTROL.
- THERE WILL BE NO DEBRIS BURIED OR DISPOSED OF ON THE SITE.
- BEFORE THE CONTRACTOR CAN BEGIN CONSTRUCTION HE MUST OBTAIN THE PROPER PERMITS AND/OR APPROVALS FROM NEW CASTLE COUNTY (NCC), DELAWARE DEPARTMENT OF NATURAL RESOURCES AND ENVIRONMENTAL CONTROL (DNREC), DELAWARE DEPARTMENT OF TRANSPORTATION (DELDOT), AND APPROPRIATE STATE AND COUNTY AGENCIES.
- DRAINAGE, EROSION AND SEDIMENT CONTROL, AND STORMWATER MANAGEMENT SHALL BE PROVIDED IN ACCORDANCE WITH DNREC AND THE NEW CASTLE COUNTY DRAINAGE CODE.
- ARTESIAN WATER SUPPLY IS SUBJECT TO THE APPROVAL OF THE DELAWARE STATE DEPARTMENT OF NATURAL RESOURCES & ENVIRONMENTAL CONTROL AND THE DELAWARE DEPARTMENT OF PUBLIC HEALTH.
- SEWERAGE IS SUBJECT TO THE APPROVAL OF THE NEW CASTLE COUNTY DEPARTMENT OF SPECIAL SERVICES. AT THE TIME OF APPROVAL OF THIS PLAN, SEWER CAPACITY EXISTED TO ACCOMMODATE THE ANTICIPATED FLOWS GENERATED BY THIS ADDITIONAL DEVELOPMENT. NEW CASTLE COUNTY HAS COMMITTED TO PROVIDE SEWER SERVICE IN ACCORDANCE WITH THE LAND DEVELOPMENT IMPROVEMENT AGREEMENT FOR THIS DEVELOPMENT. THE OWNER OF THE PROPERTY, HIS SUCCESSORS OR ASSIGNS, SHALL BE RESPONSIBLE FOR EXTENDING SEWER SERVICES TO EACH LOT SHOWN ON OR CREATED BY THIS PLAN.

GENERAL NOTES CONT'D:

- THIS PLAN SUPERSEDES, IN PART, THE PLAN OF CONRAD SCHOOLS OF SCIENCE DATED 4/15/14 AND RECORDED ON 5/30/14 IN THE RECORDER OF DEEDS IN AND FOR NEW CASTLE COUNTY, STATE OF DELAWARE, DEED NO. H115 148.
- TRAFFIC IMPACT STUDY: A TRAFFIC IMPACT STUDY IS NOT REQUIRED FOR THIS PROJECT.
- THIS PLAN IS SUBJECT TO THE IMPACT FEE PROVISION OF CHAPTER 40, ARTICLE 14 OF THE NEW CASTLE CODE, AS AMENDED BY NEW CASTLE COUNTY COUNCIL.
- A LANDSCAPE PLAN, PREPARED BY _____ LAST DATED _____ OR AS AMENDED AND APPROVED IN WRITING BY THE DEPARTMENT OF LAND USE, IS HEREBY CONSIDERED A PART OF THE RECORD PLAN.
- UNLESS OTHERWISE SPECIFIED ON THE PLAN, SIDEWALKS SHALL BE INSTALLED IN THE LOCATION SHOWN ON THIS PLAN PRIOR TO THE ISSUANCE OF A CERTIFICATE OF OCCUPANCY FOR THE DWELLING IN FRONT OF WHICH THEY ARE SHOWN. SIDEWALKS SHALL BE FIVE (5) FEET IN WIDTH AND CONSTRUCTED OF PORTLAND CEMENT CONCRETE.
- ALL FIRE HYDRANTS, STANDPIPES, CONNECTIONS, ETC. SHALL BE MARKED AND/OR PROTECTED IN ACCORDANCE WITH STANDARDS FOR COMPLIANCE WITH DELAWARE STATE FIRE REGULATIONS.
- EROSION AND SEDIMENT CONTROL PRACTICES AND CONSTRUCTION METHODS SHALL COMPLY WITH THE PROCEDURES OUTLINED IN THE "DELAWARE EROSION AND SEDIMENT CONTROL" HANDBOOK, MOST CURRENT (DNREC).
- THIS PLAN IS SUBJECT TO THE IMPACT FEE PROVISIONS OF CHAPTER 40, ARTICLE 14 OF THE NEW CASTLE COUNTY CODE, AS MAY BE AMENDED BY NEW CASTLE COUNTY COUNCIL.

SURVEY LEGEND

ITEM	EXISTING	PROPOSED
UNMARKED POINT	○	○
CONCRETE MONUMENT	□ FCM	□ SCM
IRON PIPE	● FIP	● SIP
IRON PIPE W/ CAP	● FIPC	● SIPC
IRON ROD	● FIR	● SIR
IRON ROD W/ CAP	● FIRC	● SIRC
DRILL HOLE	⊗ FDH	⊗ SDH
STONE	⊗ FSTONE	⊗ SSTONE
PK NAIL	⊗ FPK	⊗ SPK

SHEET INDEX

C-001	COVER SHEET
C-101	EXISTING CONDITION / DEMOLITION PLAN
C-201	SITE PLAN
C-401	GRADING PLAN
C-500	SEDIMENT AND STORMWATER MANAGEMENT COVER SHEET
C-501	PRE-CONSTRUCTION SEDIMENT & STORMWATER MANAGEMENT PLAN
C-502	CONSTRUCTION SEDIMENT & STORMWATER MANAGEMENT PLAN
C-504	EROSION AND SEDIMENT CONTROL DETAILS
C-505	EROSION AND SEDIMENT CONTROL DETAILS
C-901	CONSTRUCTION DETAILS
C-902	CONSTRUCTION DETAILS
C-903	CONSTRUCTION DETAILS

NATURAL RESOURCES DATA TABLE

PROTECTED RESOURCE	PROTECTION RATIO	TOTAL AREA*	DISTURBED AREA	PROTECTED AREA	PROTECTED AREA RATIO
PROHIBITIVE SLOPES (>25%)	1.00	2,192 S.F.	0 S.F.	2,192 S.F.	1.0
PRECAUTIONARY SLOPES (15-25)	0.25	31,114 S.F.	850 S.F.	30,264 S.F.	0.97

PURPOSE OF PLAN

- TO CONSTRUCT TWO ATHLETIC FIELDS AND A SOFTBALL FIELD WITH ASSOCIATED DUGOUTS AND SIDEWALK.

CERTIFICATION OF PLAN APPROVAL

APPROVED _____ (DATE) BY _____ (GENERAL MANAGER)
FOR DEPARTMENT OF LAND USE OF NEW CASTLE COUNTY.

APPROVED _____ (DATE) BY _____ (GENERAL MANAGER)
FOR COUNTY COUNCIL OF NEW CASTLE COUNTY.

OWNERS CERTIFICATION

WE, RED CLAY CREEK CONSOLIDATED SCHOOL DISTRICT, HEREBY CERTIFY THAT WE ARE THE OWNER OF THE PROPERTY WHICH IS SUBJECT TO THIS PLAN AND THAT THE LAND USE ACTION PROPOSED BY THIS PLAN IS MADE AT OUR DIRECTION AND THAT WE AUTHORIZE THIS PLAN TO BE RECORDED IN ACCORDANCE WITH THE REGULATIONS OF THE NEW CASTLE COUNTY UNIFIED DEVELOPMENT CODE.

MARCIN MICHALSKI, MANAGER OF FACILITIES AND MAINTENANCE _____ DATE _____

ENGINEERS CERTIFICATION

I, J. MICHAEL RIEMANN, HEREBY CERTIFY THAT I AM A REGISTERED PROFESSIONAL ENGINEER WITH A BACKGROUND IN CIVIL ENGINEERING IN THE STATE OF DELAWARE AND THAT ALL OF THE INFORMATION ON THIS PLAN IS TRUE AND CORRECT AND THAT I AM A LICENSED SURVEYOR IN ACCORDANCE WITH THE REGULATIONS OF THE NEW CASTLE COUNTY UNIFIED DEVELOPMENT CODE.

J. MICHAEL RIEMANN _____ P.E. NO. 13772 _____ DATE _____

BECKER MORGAN GROUP

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PROJECT TITLE
APPLICATION NO. 2017-0445

CONRAD SCHOOLS OF SCIENCE: ATHLETIC FIELDS

201 JACKSON AVE.
WILMINGTON, DE 19804
CHRISTIANA HUNDRED

SHEET TITLE
EXPLORATORY COVER SHEET

0 30 60 120
SCALE: 1" = 60'

MARK DATE DESCRIPTION
LAYER STATE COLOR

PROJECT NO.: 2013222.01
DATE: 6/30/17
SCALE: 1" = 60'
DRAWN BY: R.J.M. / PROJ. MGR.: J.S.F.
SHEET

C-001
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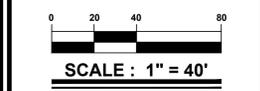


PROJECT TITLE
APPLICATION NO. 2017-0445

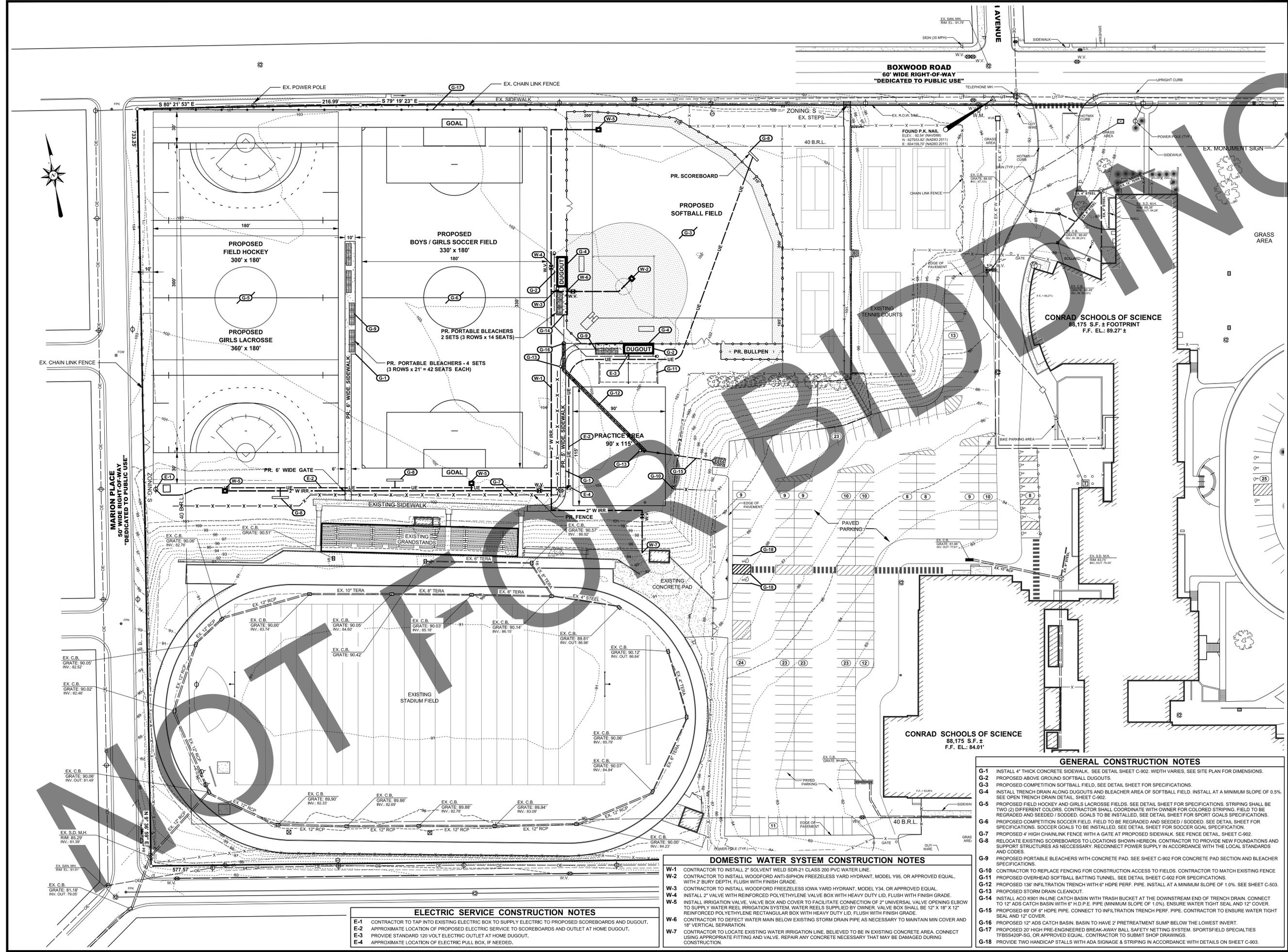
CONRAD SCHOOLS OF SCIENCE: ATHLETIC FIELDS

201 JACKSON AVE.
WILMINGTON, DE 19804
CHRISTIANA HUNDRED

SITE PLAN



MARK	DATE	DESCRIPTION
LAYER/STATE: C-201		
PROJECT NO.:		2013222.01
DATE:		6/30/17
SCALE:		1" = 40'
DRAWN BY:		R.J.M. PROJ. MGR.: J.S.F.
SHEET		
C-201		
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ELECTRIC SERVICE CONSTRUCTION NOTES

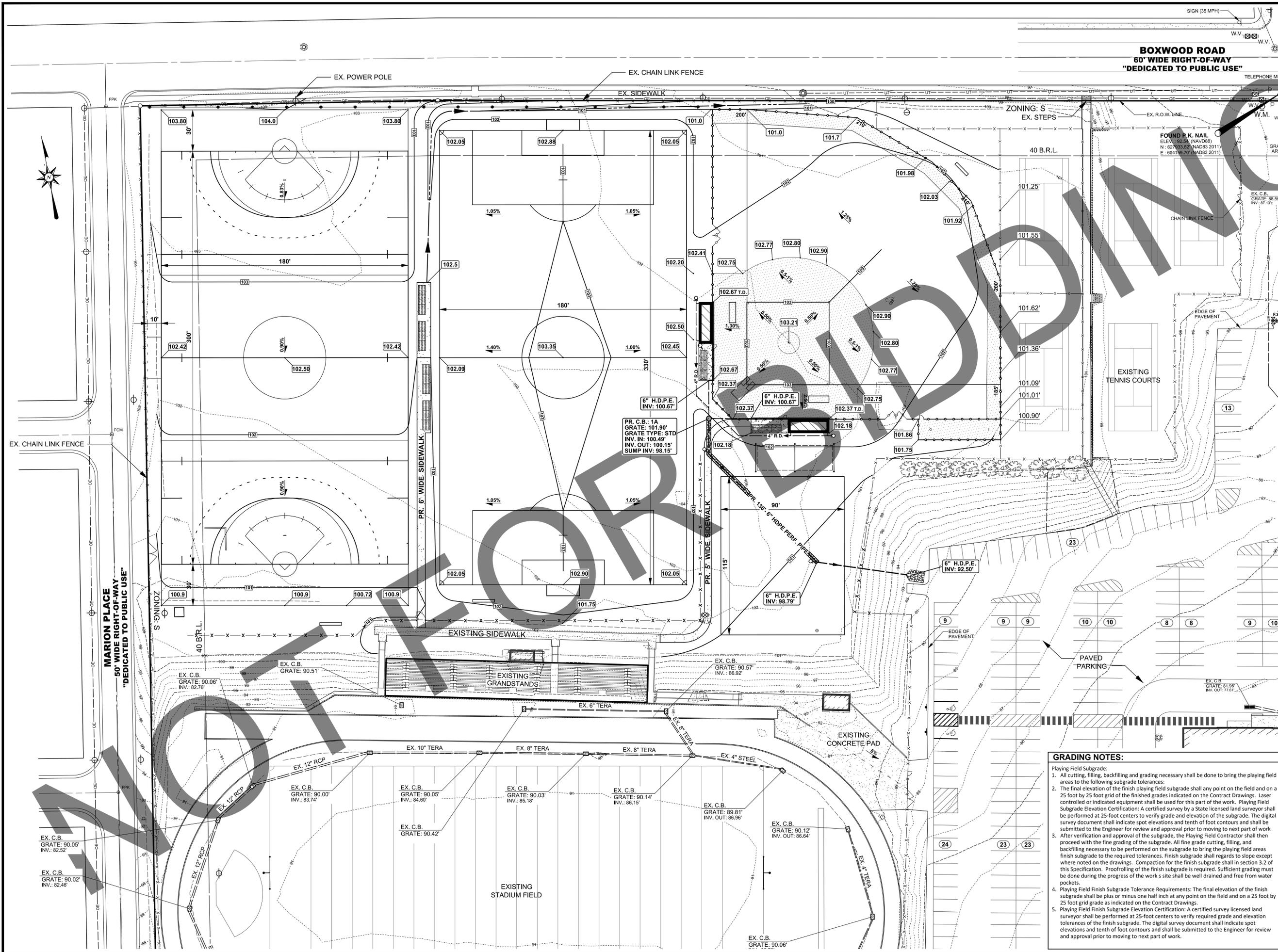
E-1 CONTRACTOR TO TAP INTO EXISTING ELECTRIC BOX TO SUPPLY ELECTRIC TO PROPOSED SCOREBOARDS AND DUGOUT.
E-2 APPROXIMATE LOCATION OF PROPOSED ELECTRIC SERVICE TO SCOREBOARDS AND OUTLET AT HOME DUGOUT.
E-3 PROVIDE STANDARD 120 VOLT ELECTRIC OUTLET AT HOME DUGOUT.
E-4 APPROXIMATE LOCATION OF ELECTRIC PULL BOX, IF NEEDED.

DOMESTIC WATER SYSTEM CONSTRUCTION NOTES

W-1 CONTRACTOR TO INSTALL 2" SOLVENT WELD SDR-21 CLASS 200 PVC WATER LINE.
W-2 CONTRACTOR TO INSTALL WOODFORD ANTI-SIPHON FREEZELESS YARD HYDRANT, MODEL Y95, OR APPROVED EQUAL, WITH 2" BURY DEPTH, FLUSH WITH FINISH GRADE.
W-3 CONTRACTOR TO INSTALL WOODFORD FREEZELESS IOWA YARD HYDRANT, MODEL Y34, OR APPROVED EQUAL.
W-4 INSTALL 2" VALVE WITH REINFORCED POLYETHYLENE VALVE BOX WITH HEAVY DUTY LID, FLUSH WITH FINISH GRADE.
W-5 INSTALL IRRIGATION VALVE, VALVE BOX AND COVER TO FACILITATE CONNECTION OF 2" UNIVERSAL VALVE OPENING ELBOW TO SUPPLY WATER REEL IRRIGATION SYSTEM. WATER REELS SUPPLIED BY OWNER. VALVE BOX SHALL BE 12" X 18" X 12" REINFORCED POLYETHYLENE RECTANGULAR BOX WITH HEAVY DUTY LID, FLUSH WITH FINISH GRADE.
W-6 CONTRACTOR TO DEFECT WATER MAIN BELOW EXISTING STORM DRAIN PIPE AS NECESSARY TO MAINTAIN MIN COVER AND 18" VERTICAL SEPARATION.
W-7 CONTRACTOR TO LOCATE EXISTING WATER IRRIGATION LINE, BELIEVED TO BE IN EXISTING CONCRETE AREA. CONNECT USING APPROPRIATE FITTING AND VALVE. REPAIR ANY CONCRETE NECESSARY THAT MAY BE DAMAGED DURING CONSTRUCTION.

GENERAL CONSTRUCTION NOTES

G-1 INSTALL 4" THICK CONCRETE SIDEWALK. SEE DETAIL SHEET C-902. WIDTH VARIES. SEE SITE PLAN FOR DIMENSIONS.
G-2 PROPOSED ABOVE GROUND SOFTBALL DUGOUTS.
G-3 PROPOSED COMPETITION SOFTBALL FIELD. SEE DETAIL SHEET FOR SPECIFICATIONS.
G-4 INSTALL TRENCH DRAIN ALONG DUGOUTS AND BLEACHER AREA OF SOFTBALL FIELD. INSTALL AT A MINIMUM SLOPE OF 0.5%. SEE OPEN TRENCH DRAIN DETAIL, SHEET C-902.
G-5 PROPOSED FIELD HOCKEY AND GIRLS LACROSSE FIELDS. SEE DETAIL SHEET FOR SPECIFICATIONS. STRIPING SHALL BE TWO (2) DIFFERENT COLORS. CONTRACTOR SHALL COORDINATE WITH OWNER FOR COLORED STRIPING. FIELD TO BE REGRADED AND SEEDED / SODDED. GOALS TO BE INSTALLED. SEE DETAIL SHEET FOR SPORT GOALS SPECIFICATIONS.
G-6 PROPOSED COMPETITION SOCCER FIELD. FIELD TO BE REGRADED AND SEEDED / SODDED. SEE DETAIL SHEET FOR SPECIFICATIONS. SOCCER GOALS TO BE INSTALLED. SEE DETAIL SHEET FOR SOCCER GOAL SPECIFICATION.
G-7 PROPOSED 4" HIGH CHAINLINK FENCE WITH A GATE AT PROPOSED SIDEWALK. SEE FENCE DETAIL, SHEET C-902.
G-8 RELOCATE EXISTING SCOREBOARDS TO LOCATIONS SHOWN HEREON. CONTRACTOR TO PROVIDE NEW FOUNDATIONS AND SUPPORT STRUCTURES AS NECESSARY. RECONNECT POWER SUPPLY IN ACCORDANCE WITH THE LOCAL STANDARDS AND CODES.
G-9 PROPOSED PORTABLE BLEACHERS WITH CONCRETE PAD. SEE SHEET C-902 FOR CONCRETE PAD LOCATION AND BLEACHER SPECIFICATIONS.
G-10 CONTRACTOR TO REPLACE FENCING FOR CONSTRUCTION ACCESS TO FIELDS. CONTRACTOR TO MATCH EXISTING FENCE.
G-11 PROPOSED OVERHEAD SOFTBALL BATTING TUNNEL. SEE DETAIL SHEET C-902 FOR SPECIFICATIONS.
G-12 PROPOSED 136" INFILTRATION TRENCH WITH 6" HDPE PIPE. PERF. INSTALL AT A MINIMUM SLOPE OF 1.0%. SEE SHEET C-503.
G-13 PROPOSED STORM DRAIN CLEANOUT.
G-14 INSTALL ACO K901 IN-LINE CATCH BASIN WITH TRASH BUCKET AT THE DOWNSTREAM END OF TRENCH DRAIN. CONNECT TO 12" ADS CATCH BASIN WITH 6" H.D.P.E. PIPE (MINIMUM SLOPE OF 1.0%). ENSURE WATER TIGHT SEAL AND 12" COVER.
G-15 PROPOSED 60" OF 6" HDPE PIPE. CONNECT TO INFILTRATION TRENCH PERF. PIPE. CONTRACTOR TO ENSURE WATER TIGHT SEAL AND 12" COVER.
G-16 PROPOSED 12" ADS CATCH BASIN. BASIN TO HAVE 2" PRETREATMENT SUMP BELOW THE LOWEST INVERT.
G-17 PROPOSED 20" HIGH PRE-ENGINEERED BREAK-AWAY BALL SAFETY NETTING SYSTEM. SPORTSFIELD SPECIALTIES TBSS420P-SG, OR APPROVED EQUAL. CONTRACTOR TO SUBMIT SHOP DRAWINGS.
G-18 PROVIDE TWO HANDICAP STALLS WITH ADA SIGNAGE & STRIPING IN ACCORDANCE WITH DETAIL SHEET C-903.



BOXWOOD ROAD
60' WIDE RIGHT-OF-WAY
"DEDICATED TO PUBLIC USE"

MARION PLACE
50' WIDE RIGHT-OF-WAY
"DEDICATED TO PUBLIC USE"

- GRADING NOTES:**
1. All cutting, filling, backfilling and grading necessary shall be done to bring the playing field areas to the following subgrade tolerances:
 2. The final elevation of the finish playing field subgrade shall any point on the field and on a 25 foot by 25 foot grid of the finished grade as indicated on the Contract Drawings. Laser controlled or indicated equipment shall be used for this part of the work. Playing Field Subgrade Elevation Certification: A certified survey by a State licensed land surveyor shall be performed at 25-foot centers to verify grade and elevation of the subgrade. The digital survey document shall indicate spot elevations and tenth of foot contours and shall be submitted to the Engineer for review and approval prior to moving to next part of work.
 3. After verification and approval of the subgrade, the Playing Field Contractor shall then proceed with the fine grading of the subgrade. All fine grade cutting, filling, and backfilling necessary to be performed on the subgrade to bring the playing field areas finish subgrade to the required tolerances. Finish subgrade shall regard to slope except where noted on the drawings. Compaction for the finish subgrade shall in section 3.2 of this Specification. Proofrolling of the finish subgrade is required. Sufficient grading must be done during the progress of the work so the site shall be well drained and free from water pockets.
 4. Playing Field Finish Subgrade Tolerance Requirements: The final elevation of the finish subgrade shall be plus or minus one half inch at any point on the field and on a 25 foot by 25 foot grid grade as indicated on the Contract Drawings.
 5. Playing Field Finish Subgrade Elevation Certification: A certified survey licensed land surveyor shall be performed at 25-foot centers to verify required grade and elevation tolerances of the finish subgrade. The digital survey document shall indicate spot elevations and tenth of foot contours and shall be submitted to the Engineer for review and approval prior to moving to next part of work.

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PROJECT TITLE
APPLICATION NO. 2017-0445

CONRAD SCHOOLS OF SCIENCE: ATHLETIC FIELDS

201 JACKSON AVE.
WILMINGTON, DE 19804
CHRISTIANA HUNDRED

SHEET TITLE
GRADING PLAN

SCALE: 1" = 30'

MARK	DATE	DESCRIPTION
LAYER STATE: C-401		
PROJECT NO.:	2013222.01	
DATE:	6/30/17	
SCALE:	1" = 30'	
DRAWN BY:	R.J.M.	PROJ. MGR.: J.S.F.
SHEET		
C-401		
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CONRAD SCHOOLS OF SCIENCE: ATHLETIC FIELDS

AREA OF DISTURBANCE
TOTAL : 5.50 ACRES

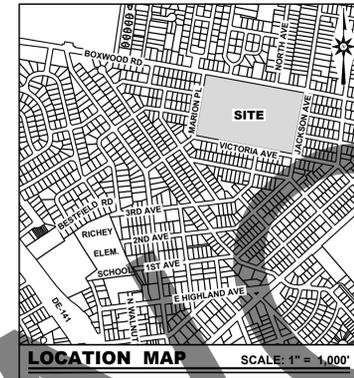
SWM MAINTENANCE AGREEMENT
THE MAINTENANCE OF STORMWATER MANAGEMENT FACILITIES ON-SITE, INCLUDING THE STORM DRAIN SYSTEM, DITCHES, SWALES, PONDS, PERVIOUS CONCRETE, ETC. SHALL BE THE RESPONSIBILITY OF THE OWNER POST CONSTRUCTION.

SEDIMENT AND STORMWATER CONSTRUCTION NOTES:

- 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 STORM WATER MANAGEMENT PLAN.
- REVIEW AND OR APPROVAL OF THE SEDIMENT AND STORM WATER MANAGEMENT PLAN SHALL NOT RELIEVE THE CONTRACTOR FROM HIS OR HER RESPONSIBILITIES FOR COMPLIANCE WITH THE REQUIREMENTS OF THE SEDIMENT AND STORM WATER REGULATIONS. NOR SHALL IT RELIEVE THE CONTRACTOR FROM ERRORS OR OMISSIONS IN THE APPROVED PLAN.
- IF THE APPROVED PLAN NEEDS TO BE MODIFIED, ADDITIONAL SEDIMENT AND STORM WATER CONTROL MEASURES MAY BE REQUIRED AS DEEMED NECESSARY BY DNREC.
- FOLLOWING SOIL DISTURBANCE OR RE-DISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED FOR ALL PERIMETER SEDIMENT CONTROL DIKES, SWALES, DITCHES, PERIMETER SLOPES, STOCKPILES, AND ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE WITHIN FOURTEEN (14) CALENDAR DAYS UNLESS MORE RESTRICTIVE FEDERAL REQUIREMENTS APPLY.
- ALL EROSION AND SEDIMENT CONTROL PRACTICES SHALL COMPLY WITH THE DELAWARE EROSION CONTROL HANDBOOK, LATEST EDITION.
- ALL SITE DEWATERING SHALL BE DONE THROUGH AN APPROVED FILTRATION DEVICE AND PREVIOUSLY APPROVED BY THE AGENCY CONSTRUCTION SITE REVIEWER FOR THE NON-EROSIVE POINT OF DISCHARGE, AND A DEWATERING PERMIT SHALL BE APPROVED BY DNREC WELL PERMITTING BRANCH.
- THE APPROVAL FOR THIS SITE IS VALID FOR FIVE (5) YEARS FROM THE APPROVAL DATE STAMPED ON THE PLAN BY DNREC.
- POST CONSTRUCTION VERIFICATION DOCUMENTS ARE TO BE SUBMITTED TO DNREC SEDIMENT AND STORMWATER PROGRAM WITHIN 90 DAYS OF STORMWATER MANAGEMENT FACILITY COMPLETION. POST CONSTRUCTION VERIFICATION DOCUMENTS ARE TO INCLUDE STORMWATER AS-BUILTS WHICH ARE SIGNED AND SEALED BY A PROFESSIONAL LAND SURVEYOR AND SHOULD BE PROVIDED BY THE CONTRACTOR.
- APPROVAL OF A SEDIMENT AND STORM WATER PLAN SHALL NOT GRANT OR IMPLY A RIGHT TO DISCHARGE STORM WATER RUNOFF. THE OWNER/DEVELOPER IS RESPONSIBLE FOR ACQUIRING ANY AND ALL AGREEMENTS, EASEMENTS, ETC., NECESSARY TO COMPLY WITH STATE DRAINAGE AND OTHER APPLICABLE LAWS.
- THE NOTICE OF INTENT FOR STORMWATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITY UNDER A NPDES GENERAL PERMIT FOR THIS PROJECT IS # **5566**. AT ANY TIME THE OWNERSHIP FOR THIS PROJECT CHANGES, A TRANSFER OF AUTHORIZATION OR A CO-PERMITTEE APPLICATION MUST BE SUBMITTED TO DNREC. THE PERMITTEE OF RECORD SHALL NOT BE RELIEVED OF THEIR RESPONSIBILITY UNTIL A NOTICE OF TERMINATION HAS BEEN PROCESSED BY DNREC.
- THE OWNER SHALL BE FAMILIAR WITH AND COMPLY WITH ALL ASPECTS OF THE NPDES CONSTRUCTION GENERAL PERMIT ASSOCIATED WITH THE PROJECT, INCLUDING BUT NOT LIMITED TO, PERFORMING WEEKLY SITE INSPECTION DURING THE CONSTRUCTION AND AFTER RAIN EVENTS AND MAINTAINING WRITTEN LOGS OF THESE INSPECTIONS.
- BEFORE ANY EARTHWORK OR EXCAVATION TAKES PLACE THE CONTRACTOR SHALL CALL MISS UTILITY AT 811 OR 1800-282-8555 AT LEAST 48 HOURS PRIOR TO CONSTRUCTION, TO HAVE ALL EXISTING UTILITY MARKED ONSITE.
- THE CONTRACTOR SHALL AT ALL TIMES PROTECT AGAINST SEDIMENT OR DEBRIS LADEN RUNOFF OR WIND FROM LEAVING THE SITE. PERIMETER CONTROL SHALL BE CHECKED DAILY AND ADJUSTED AND/OR REPAIRED TO FULLY CONTAIN AND CONTROL SEDIMENT FROM LEAVING THE SITE. ACCUMULATED SEDIMENT SHALL BE REMOVED WITHIN 11 HOURS OF REACHED HALF OF THE EFFECTIVE CAPACITY OF THE CONTROL. IN ADDITION THE CONTRACTOR MAY NEED TO ADJUST OR ALTER MEASURES IN TIME OF ADVERSE WEATHER CONDITIONS, OR AS DIRECTED BY THE AGENCY CONSTRUCTION SITE REVIEWER.
- BEST AVAILABLE TECHNOLOGY (BAT) SHALL BE EMPLOYED TO MANAGE TURBID DISCHARGES IN ACCORDANCE WITH REQUIREMENT OF 7 DEL. C. CH60, REGULATIONS GOVERNING THE CONTROL OF WATER POLLUTION, SECTION 9.1.02, KNOWN AS SPECIAL CONDITIONS FOR STORMWATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITIES, AND DEPARTMENT POLICIES, PROCEDURES AND GUIDANCE.
- DOCUMENTATION OF SOIL TESTING AND MATERIAL 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 AND THE STANDARDS AND SPECIFICATION OF THE DELAWARE EROSION AND SEDIMENT CONTROL HANDBOOK, LATEST EDITION. THE DEPARTMENT OR DELEGATED AGENCY SHALL HAVE THE DISCRETION TO REQUIRE ADDITIONAL SOIL TESTING AND REAPPLICATION OF PERMANENT OR TEMPORARY STABILIZATION IN ACCORDANCE WITH THE SPECIFICATION PROVIDED IN THE DELAWARE EROSION AND SEDIMENT CONTROL HANDBOOK, LATEST EDITION, OR ALTERNATIVE MEASURE THAT PROVIDE FUNCTIONAL EQUIVALENCY.
- PERIODIC MAINTENANCE OF ALL SEDIMENT CONTROL MEASURES IS REQUIRED TO INSURE EFFECTIVE SEDIMENT CONTROL. INSPECTION OF ALL SEDIMENT AND EROSION CONTROL MEASURES SHALL BE MADE AT LEAST WEEKLY AND AFTER EACH RAINFALL EVENT. REPAIRS SHALL BE THE CONTRACTORS RESPONSIBILITY AND MADE WITHIN 24 HOURS OF THE RAIN EVENT OR WHEN OTHERWISE IDENTIFIED.
- ALL EROSION AND SEDIMENT CONTROL PRACTICES SHALL CONFORM TO DELAWARE EROSION AND SEDIMENT CONTROL HANDBOOK, LATEST EDITION.
- THE SEQUENCE OF CONSTRUCTION ON THE APPROVED SEDIMENT AND STORMWATER MANAGEMENT PLAN MUST BE STRICTLY ADHERED. ANY DIVERGENCE FROM THE APPROVED CONSTRUCTION SEQUENCE REQUIRES A WRITTEN REQUEST TO MODIFY AND THE WRITTEN APPROVAL OF DNREC.
- A COPY OF THE APPROVED SEDIMENT AND STORMWATER MANAGEMENT PLANS MUST BE MAINTAINED ON-SITE AT ALL TIMES DURING CONSTRUCTION.
- TO PREVENT OR REDUCE THE MOVEMENT OF DUST FROM DISTURBED SOIL SURFACES THE SITE SHALL BE SPRINKLED WITH WATER UNTIL THE SURFACE IS MOIST AND REPEATED AS NECESSARY. ALTERNATIVE METHODS OF DUST CONTROL REQUIRE APPROVAL OF DNREC.
- IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO MAINTAIN AND REPAIR ALL EROSION AND SEDIMENT CONTROL AND STORMWATER MANAGEMENT PRACTICES DURING UTILITY INSTALLATION.
- ALL POINTS OF CONSTRUCTION INGRESS AND EGRESS SHALL BE PROTECTED TO PREVENT TRACKING OF MUD ONTO PUBLIC WAYS BY A STABILIZED CONSTRUCTION ENTRANCE.
- IF THE APPROVED PLAN NEEDS TO BE MODIFIED, ADDITIONAL SEDIMENT AND STORM WATER CONTROL MEASURES MAY BE REQUIRED AS DEEMED NECESSARY BY DNREC.
- A PRE-CONSTRUCTION MEETING MUST TAKE PLACE BEFORE ANY EARTH DISTURBING ACTIVITY BEGINS. THE MEETING MUST BE ATTENDED BY AN OWNER'S REPRESENTATIVE, CONTRACTOR, CCR (IF REQUIRED FOR THE SITE), AND DNREC INSPECTOR.
- DNREC RESERVES THE RIGHT TO ENTER PRIVATE PROPERTY FOR PURPOSES OF PERIODIC SITE INSPECTION.
- SOIL STOCKPILE AREAS MUST BE DELINEATED. LOCATE STOCKPILES ON AREAS WITH LITTLE OR NO SLOPE. STOCKPILES MUST BE SURROUNDED WITH SILT FENCE OR A STABILIZED EARTHEN BERM. STOCKPILE AREAS MUST BE SEEDED WITH TEMPORARY SEEDING MIXTURE AND MULCHED.
- DNREC RESERVES THE RIGHT TO WITHHOLD PERMITS AND LETTERS OF NO OBJECTION RELATED TO OBTAINING CERTIFICATES OF OCCUPANCY FROM THE LOCAL JURISDICTION FOR NON COMPLIANCE WITH THE PLANS AND SPECIFICATIONS FOR STORMWATER MANAGEMENT AND EROSION AND SEDIMENT CONTROL.
- DNREC RESERVES THE RIGHT TO ADD, DELETE, MODIFY OR OTHERWISE ALTER THE SEDIMENT CONTROL PROVISIONS OF THIS PLAN IN THE EVENT ADDITIONAL PROTECTION BECOMES NECESSARY.
- THE CONTRACTOR IS RESPONSIBLE FOR MAINTENANCE OF ALL SEDIMENT AND EROSION CONTROL MEASURES DURING CONSTRUCTION.
- ALL TEMPORARY STOCKPILES ARE TO BE LOCATED ON AREAS WITH LITTLE OR NO SLOPE AND PROTECTED BY SILT FENCE OR A STABILIZED EARTHEN BERM AND ARE TO BE TEMPORARILY STABILIZED.
- EROSION AND SEDIMENT CONTROL WILL BE STRICTLY ENFORCED.
- SEDIMENT CONTROL FOR UTILITY CONSTRUCTION IN AREAS OUTSIDE OF DESIGNED CONTROLS:
 - EXCAVATED TRENCH MATERIAL SHALL BE PLACED ON THE HIGH SIDE OF THE TRENCH.
 - IMMEDIATELY FOLLOWING PIPE INSTALLATION THE TRENCH SHALL BE BACK FILLED, COMPACTED AND STABILIZED.
 - TEMPORARY SILT FENCE OR STRAW BALE DIKES SHALL BE PLACED IMMEDIATELY DOWNSTREAM OF ANY DISTURBED AREA INTENDED TO REMAIN DISTURBED LONGER THAN ONE WORKING DAY.
- EROSION CONTROL MATTING IS REQUIRED ON SLOPES OF 3:1 OR GREATER IN AREAS OF CONCENTRATED FLOW. MATTING TYPE IS TO BE SSM-II NORTH AMERICAN GREEN S150BN (OR APPROVED EQUIVALENT)
- ALL PERIMETER CONTROLS ARE TO BE REVIEWED BY DNREC SITE INSPECTOR AND APPROVED PRIOR TO PROCEEDING WITH FURTHER SITE DISTURBANCE OR CONSTRUCTION.
- NOTIFY DNREC INSPECTOR A MINIMUM OF (5) DAYS PRIOR TO THE START OF THE STORMWATER SYSTEM CONSTRUCTION. STORMWATER FACILITIES MUST BE REVIEWED THROUGH THEIR CONSTRUCTION.
- EROSION AND SEDIMENT CONTROL DEVICES SHOULD BE REMOVED ONLY AFTER WORK IN AN AREA HAS BEEN COMPLETED AND STABILIZED, WITH DNREC SEDIMENT AND STORMWATER PROGRAM SITE INSPECTORS APPROVAL.
- 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 SEDIMENT AND STORMWATER MANAGEMENT PLAN IMPLEMENTED, AND ACCEPTANCE OF THE FINAL OPERATION AND MAINTENANCE PLAN.

SEDIMENT & STORMWATER MANAGEMENT PLANS

CHRISTIANA HUNDRED CHRISTINA RIVER WATERSHED TAX PARCEL: 0704240179 WILMINGTON / NEW CASTLE COUNTY, DE



SITE DATA	
1. OWNER OF RECORD:	RED CLAY CREEK CONSOLIDATED SCHOOL DISTRICT (MARCIN MICHALSKI)
2. ENGINEER / SURVEYOR:	1502 SPRUCE AVENUE WILMINGTON, DE 19805 (302) 892-3284
3. DELEGATED AGENCY:	DNREC DIVISION OF WATERSHED STEWARDSHIP S & S 89 KINGS HWY (RICHARDSON & ROBBINS BUILDING) DOVER DE 19901 (302) 739-9921
4. PROPERTY MAP NUMBER:	0784240179
5. ZONING CLASSIFICATION:	EXISTING: S (SUBURBAN) / SCHOOL PROPOSED: S (SUBURBAN) / SCHOOL
6. DEED SUMMARY:	H115-146
7. NUMBER OF LOTS:	EXISTING: 1 PROPOSED: 1
8. PRESENT USE:	HIGH SCHOOL
9. PROPOSED USE:	HIGH SCHOOL
10. TOTAL SITE AREA:	19.73 ACRES ±
11. EXISTING BUILDING:	FOOTPRINT: 88,175 S.F. ± ACCESSORY: 5,882 S.F. ±
12. PARKING CALCULATIONS:	NO CHANGES TO PARKING
13. BULK AREA STANDARDS:	S (SUBURBAN) / SCHOOL STREET: 40 FT. SIDE: 25 FT. REAR: 40 FT. PAVING STREET / LOT YARD: 20 FT. / 10 FT. LOT AREA (MIN.): 40 FT. LOT WIDTH (MIN.): 100 FT. MIN. SITE AREA: 1 ACRE MIN. OS/SLSR: 0.50
14. TRACT AREA CALCS:	EXISTING: 2.15 ACRES PROPOSED: 2.15 ACRES IMPERVIOUS: 5.33 ACRES OPEN SPACE: 12.25 ACRES TOTAL: 19.73 ACRES
15. RIGHT-OF-WAY:	JACKSON AVENUE 50' ROW LOCAL ROAD VICTORIA AVENUE 50' ROW LOCAL ROAD MARION PLACE 50' ROW LOCAL ROAD BOXWOOD ROAD 60' ROW MINOR ARTERIAL
16. BUILDING HEIGHT:	PERMITTED: 45 FT. (MAX.) PROPOSED: NONE PROPOSED
17. SOURCE OF WATER:	ARTESIAN WATER COMPANY, INC.
18. SOURCE OF SEWER:	PUBLIC - NEW CASTLE COUNTY
19. SURVEY BENCHMARK:	FOUND P.K. NAIL VERTICAL: NAVD88 HORIZONTAL: NAD83 (2011)
20. MONUMENTATION:	EXISTING: 0 FOUND PROPOSED: 3 SET
21. BENCHMARK LAT. / LONG.:	39 723889; -75 601389
22. TOTAL DISTURBED AREA:	5.50 ACRES ±
23. FIRE HYDRANTS:	EXISTING: 2 PROPOSED: 0
24. DNREC S&S PROGRAM No.:	2017-075
25. DISCHARGE LOCATION:	AP-1 - BOXWOOD ROAD (1.76 AC) AP-2 - MARION PLACE CATCH BASINS (8.48 AC) AP-3 - PARKING LOT CATCH BASIN (1.30 AC)

SHEET INDEX	
SHEET NO.:	TITLE:
C-500	SEDIMENT AND STORMWATER MANAGEMENT COVER SHEET
C-501	PRE-CONSTRUCTION SITE STORMWATER MANAGEMENT PLAN
C-502	CONSTRUCTION SITE STORMWATER MANAGEMENT PLAN
C-503 / C-504	EROSION AND SEDIMENT CONTROL DETAILS
C-PRE / C-POST	PRE / POST CONTRIBUTING DRAINAGE AREA PLAN (INC. WITHIN REPORT)

CONSTRUCTION SEQUENCE FOR EROSION AND SEDIMENT CONTROL

- NOTIFY THE DNREC SEDIMENT AND STORMWATER PROGRAM IN WRITING AT LEAST FIVE (5) DAYS PRIOR TO THE START OF CONSTRUCTION. FAILURE TO DO SO CONSTITUTES A VIOLATION OF THE APPROVED SEDIMENT AND STORMWATER MANAGEMENT PLAN.
- OBTAIN ALL CITY, COUNTY, AND STATE PERMITS PRIOR TO THE START OF CONSTRUCTION.
- PRIOR TO ANY CLEARING, INSTALLATION OF SEDIMENT CONTROL MEASURES OR GRADING, A PRE-CONSTRUCTION MEETING MUST BE SCHEDULED AND CONDUCTED WITH THE AGENCY CONSTRUCTION SITE REVIEWER, THE LANDOWNER/DEVELOPER, CONTRACTOR, AND CERTIFIED CONSTRUCTION REVIEWER ARE REQUIRED TO BE IN ATTENDANCE AT THE PRE-CONSTRUCTION MEETING. THE DESIGNER IS RECOMMENDED TO ATTEND.
- CLEARING AND GRUBBING FOR THOSE AREAS NECESSARY FOR INSTALLATION OF PERIMETER CONTROLS
- INSTALL STABILIZED CONSTRUCTION ENTRANCE AND PERIMETER CONTROLS AT THE LOCATIONS SHOWN ON THE SITE PLAN. CLEARLY MARK INFILTRATION TRENCH AREA. ALL PERIMETER CONTROLS ARE TO BE REVIEWED BY THE AGENCY CONSTRUCTION SITE REVIEWER AND APPROVED PRIOR TO PROCEEDING WITH FURTHER SITE DISTURBANCE OR CONSTRUCTION.
- THE CONTRACTOR SHALL AT ALL TIMES PROTECT AGAINST SEDIMENT OR DEBRIS LADEN RUNOFF OR WIND FROM LEAVING THE SITE. PERIMETER CONTROLS SHOULD BE CHECKED DAILY AND ADJUSTED AND/OR REPAIRED 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 AGENCY CONSTRUCTION SITE REVIEWER.
- NOTIFY THE PERSON RESPONSIBLE FOR STORMWATER SYSTEM CONSTRUCTION REVIEW AT LEAST THREE (3) DAYS PRIOR TO THE START OF THE STORMWATER SYSTEM CONSTRUCTION. STORMWATER FACILITIES MUST BE REVIEWED THROUGHOUT THEIR CONSTRUCTION.
- INSTALL INFILTRATION TRENCH AS PER THE APPROVED PLANS.
- INSTALL UNDERGROUND UTILITIES LINES INCLUDING STORM DRAIN PROCEDURE.
- ROUGH GRADE ALL NON PAVED AREAS ON THE PROJECT SITE. INSTALL SIDEWALKS, HANDICAP RAMPS AND OTHER SITE FEATURES, SUCH AS DUGOUTS.
- FINAL GRADE ALL NON PAVED AREAS.
- EROSION AND SEDIMENT CONTROL DEVICES SHOULD BE REMOVED ONLY AFTER WORK IN AN AREA HAS BEEN COMPLETED AND STABILIZED, WITH APPROVAL FROM THE AGENCY CONSTRUCTION SITE REVIEWER.
- PRIOR TO COMMENCING A NEW PHASE OF CONSTRUCTION, THE CONTRACTOR SHALL RECEIVE APPROVAL FROM THE AGENCY CONSTRUCTION SITE REVIEWER THAT THE PREVIOUS PHASE HAS BEEN SUFFICIENTLY STABILIZED.
- REMOVE ANY REMAINING PERIMETER CONTROLS AFTER STABILIZATION IS COMPLETED. INSPECTED AND APPROVED BY EROSION & SEDIMENT CONTROL INSPECTOR. INSPECT STORM DRAIN PIPES TO ENSURE THEY ARE CLEAN, CLEAR AND SILT FREE.
- 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.
- VEHICULAR TRAFFIC SHOULD BE PROHIBITED FROM THE AREA OF THE BOUNDARIES IN NOTE ABOVE (15).

ENGINEERS CERTIFICATION

I, J. MICHAEL RIEMANN, HEREBY CERTIFY THAT I AM A REGISTERED ENGINEER IN THE STATE OF DELAWARE, THAT THE INFORMATION SHOWN HEREON HAS BEEN PREPARED UNDER MY SUPERVISION AND TO MY BEST KNOWLEDGE AND BELIEF, THIS PLAN COMPLIES WITH THE APPLICABLE STATE AND LOCAL REGULATIONS AND ORDINANCES AND REPRESENTS GOOD ENGINEERING PRACTICES AS REQUIRED BY THE APPLICABLE LAWS OF THE STATE OF DELAWARE.

J. MICHAEL RIEMANN	P.E. NO. 13772	DATE
BECKER MORGAN GROUP, INC. 250 SOUTH MAIN STREET SUITE 109 NEWARK, DELAWARE 19711 PHONE: 302-369-3700 FAX: 302-734-7965		

OWNERS CERTIFICATION

I, THE UNDERSIGNED CERTIFY THAT ALL LAND CLEARING, CONSTRUCTION AND DEVELOPMENT SHALL BE DONE PURSUANT TO THE APPROVED PLAN AND THAT RESPONSIBLE PERSONNEL (I.E. BLUE CARD HOLDER) INVOLVED IN THE LAND DISTURBANCE WILL HAVE A CERTIFICATION OF TRAINING PRIOR TO INITIATION OF THE PROJECT. AT A DNREC SPONSORED OR APPROVED TRAINING COURSE FOR THE CONTROL OF EROSION AND SEDIMENT DURING CONSTRUCTION. IN ADDITION I GRANT DNREC SEDIMENT AND STORMWATER PROGRAM AND/OR THE RELEVANT DELEGATED AGENCY THE RIGHT TO CONDUCT ON-SITE REVIEWS, AND I UNDERSTAND MY RESPONSIBILITIES UNDER THE NPDES CONSTRUCTION GENERAL PERMIT, AS REFERENCED ON THIS COVERSHEET.

MARCIN MICHALSKI - MANGER OF FACILITIES (TAX PARCEL No.: 0704240179)	DATE
--	------

CONRAD SCHOOLS OF SCIENCE
201 JACKSON AVE.
WILMINGTON, DE. 19804
PHONE: (302) 992-5545

SEDIMENT AND STORMWATER APPROVAL STAMP



ARCHITECTURE
ENGINEERING

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PROJECT TITLE
APPLICATION NO. 2017-0445

CONRAD SCHOOLS OF SCIENCE: ATHLETIC FIELDS

201 JACKSON AVE.
WILMINGTON, DE 19804
CHRISTIANA HUNDRED

SHEET TITLE

SEDIMENT AND STORMWATER MANGEMENT COVER SHEET

ISSUE BLOCK

MARK	DATE	DESCRIPTION
LAYER/STATE	C-500	

PROJECT NO.: 2013222.01
DATE: 6/30/17
SCALE: NTS
DRAWN BY: R.J.M. | PROJ. MGR.: J.S.F.

SHEET
C-500
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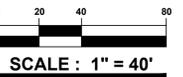
PROJECT TITLE
APPLICATION NO. 2017-0445

CONRAD SCHOOLS OF SCIENCE: ATHLETIC FIELDS

201 JACKSON AVE.
WILMINGTON, DE 19804
CHRISTIANA HUNDRED

SHEET TITLE

PRE - CONSTRUCTION SITE STORMWATER MANAGEMENT PLAN

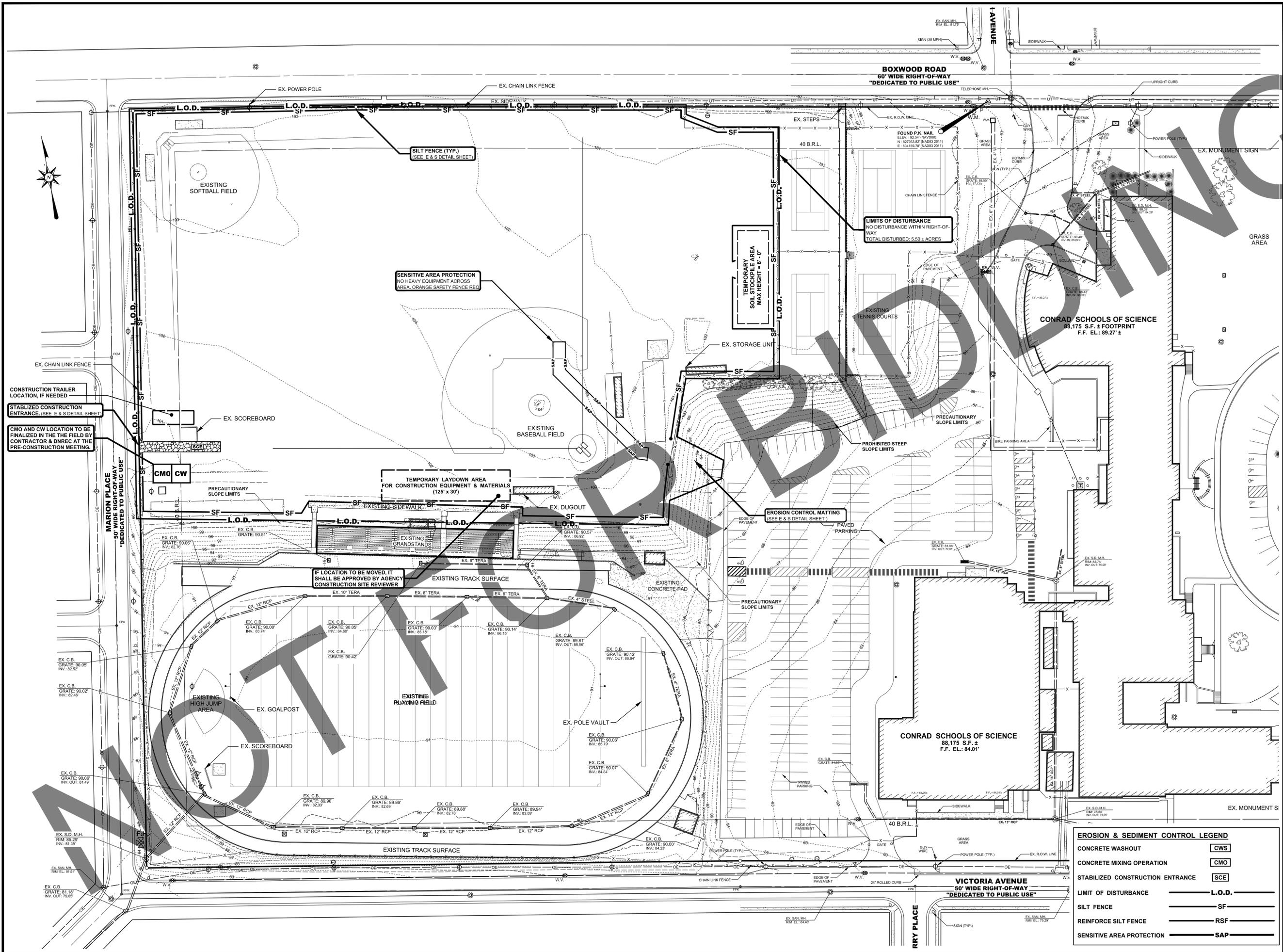


ISSUE BLOCK

MARK	DATE	DESCRIPTION
LAYER:STATE: C-501		

PROJECT NO.: 2013222.01
DATE: 6/30/17
SCALE: 1" = 40"
DRAWN BY: R.J.M. PROJ. MGR.: J.S.F.
SHEET

C-501
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EROSION & SEDIMENT CONTROL LEGEND

CONCRETE WASHOUT	CWS
CONCRETE MIXING OPERATION	CMO
STABILIZED CONSTRUCTION ENTRANCE	SCE
LIMIT OF DISTURBANCE	L.O.D.
SILT FENCE	SF
REINFORCE SILT FENCE	RSF
SENSITIVE AREA PROTECTION	SAP

Standard Detail & Specifications Silt Fence

DATA
MAX SLOPE: 2-10%

Source: Adapted from MD Sds. & Specs. for ESC
Symbol: **SF**
Detail No: **DE-ESC-3.1.2.1**
Sheet 1 of 2
Date: 6/05

Standard Detail & Specifications Silt Fence

Construction Detail

Construction Notes:

- Geosynthetic fabric to be fastened securely to fence posts with wire ties or staples.
- When two sections of filter cloth adjoin each other they shall be overlapped by six inches and folded.
- Maintenance shall be performed as needed and material removed when "bulges" develop in the silt fence.

Materials:

- Stakes: Steel I-beam T or UJ or 2" x 2" hardwood
- Geosynthetic Fabric: Type GD-1
- Reinforcing strip: Wooden lath, plastic strip or other approved equivalent
- Prefabricated Linth: Geotab, Envirocrete, or approved equivalent

Source: Adapted from MD Sds. & Specs. for ESC
Symbol: **SF**
Detail No: **DE-ESC-3.1.2.1**
Sheet 2 of 2
Date: 6/05

Standard Detail & Specifications Soil Stockpile

DATA
SEE SHEET C-500s

Source: Adapted from Colorado Urban Storm Drainage Criteria Manual, Vol 3
Symbol: **SP**
Detail No: **DE-ESC-3.7.3**
Sheet 1 of 2
Date: 03/13

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 erodes 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
Date: 03/13

Standard Detail & Specifications Construction Site Waste Mgt & Spill Control

DATA
NOT APPLICABLE

Source: Delaware ESC Handbook
Symbol:
Detail No: **DE-ESC-3.6.1**
Sheet 1 of 5
Date: 05/15

Standard Detail & Specifications Construction Site Waste Mgt & Spill Control

Pollution Prevention - Spill Prevention

- Fueling should only take place in signed designated areas, away from downstream drainage facilities and watercourses.
- Fueling must be with nozzles equipped with automatic shut-off to control drips. Do not top off.
- Protect the areas where equipment or vehicles are being repaired, maintained, fueled or parked from storm water run-off and runoff.
- Use barriers such as berms to prevent storm water run-on and runoff, and to contain spills.
- Place a "Fueling Area" sign next to each fueling area.
- Store hazardous materials such as fuel, solvents, oil and chemicals in secondary containment.
- Inspect vehicles and equipment for leaks on each day of use. Repair fluid and oil leaks immediately.
- Absorbent spill clean-up materials and spill kits must be available in fueling areas and on fuel trucks.
- If fueling is to take place at night, make sure the fueling area is sufficiently illuminated.
- Properly dispose of used oil, fluids, lubricants and spill clean-up materials.

CLEAN UP SPILLS

- If it is safe to do so, immediately contain and clean up any chemical and/or hazardous material spills.
- Properly dispose of used oil, fluids, lubricants and spill clean-up materials.
- Do not pour or splash or wash them down with water.

LEAKS AND DROPS

- Use drip pans or absorbent pads at all times. Place under and around leaky equipment.
- Do not allow oil, grease, fuel or chemicals to drip onto the ground.
- Have spill kits and clean up material on-site.
- Repair leaky equipment promptly or remove problem vehicles and equipment from the site. Clean up contaminated soil immediately.
- Store contaminated waste in sealed containers constructed of suitable material. Label these containers properly.
- Clean up all spills and leaks. Promptly dispose of waste and spent clean up materials.

Source: Delaware ESC Handbook
Symbol:
Detail No: **DE-ESC-3.6.1**
Sheet 1 of 5
Date: 05/15

Standard Detail & Specifications Construction Site Waste Mgt & Spill Control

Notes:

The Construction Site Pollution Prevention Plan should include the following elements:

- Material Inventory**
Document the storage and use of the following materials:
 - Concrete
 - Detergents
 - Paints (enamel and latex)
 - Cleaning solvents
 - Pesticides
 - Wood scraps
 - Fertilizers
 - Petroleum based products
- Good housekeeping practices**
 - Store only enough product required to do the job.
 - All materials shall be stored in a neat, orderly manner in their original labeled containers and covered.
 - Substances shall not be mixed.
 - When possible, all of a product shall be used up prior to disposal of the container.
 - Manufacturers' instructions for disposal shall be strictly adhered to.
 - The site foreman shall designate someone to inspect all BMPs daily.
- Waste management practices**
 - All waste materials shall be collected and stored in sealed dumpsters in a location that does not drain to a waterbody.
 - Waste materials shall be salvaged and/or recycled whenever possible.
 - The dumpsters shall be emptied a minimum of twice per week, or more if necessary. The licensed trash hauler is responsible for cleaning out dumpsters.

Source: Adapted from USEPA Pub. 840-B-92-002
Symbol:
Detail No: **DE-ESC-3.6.1**
Sheet 3 of 5
Date: 05/15

Standard Detail & Specifications Construction Site Waste Mgt & Spill Control

Notes (cont.)

- Trash shall be disposed of in accordance with all applicable Delaware laws.
- Trash cans shall be placed at lunch spots and littering is strictly prohibited. Recycle bins shall be placed near the construction trailer.
- If fertilizer bags can not be stored in a weather-proof location, they shall be kept on a pallet and covered with plastic sheeting which is overlapped and anchored.
- Equipment maintenance practices**
 - If possible, equipment should be taken to off-site commercial facilities for washing and maintenance.
 - If performed on-site, vehicles shall be washed with high-pressure water spray without detergents in an area contained by an impervious berm.
 - Drip pans shall be used for all equipment maintenance.
 - Equipment shall be inspected for leaks on a daily basis.
 - Washout from concrete trucks shall be disposed of in a temporary pit for hardening and proper disposal.
 - Fuel nozzles shall be equipped with automatic shut-off valves.
 - All used products such as oil, antifreeze, solvents and tires shall be disposed of in accordance with manufacturers' recommendations and local, state and federal laws and regulations.
- Spill prevention practices**
 - Potential spill areas shall be identified and contained in covered areas with no connection to the storm drain system.
 - Warning signs shall be posted in hazardous material storage areas.
 - Preventive maintenance shall be performed on all tanks, valves, pumps, pipes and other equipment as necessary.
 - Low or non-toxic substances shall be prioritized for use.

Source: Adapted from USEPA Pub. 840-B-92-002
Symbol:
Detail No: **DE-ESC-3.6.1**
Sheet 4 of 5
Date: 05/15

Standard Detail & Specifications Construction Site Waste Mgt & Spill Control

Notes (cont.)

- Contact information for reporting spills through the DNREC 24-Hour Toll Free Number shall be prominently posted.
- Education**
 - Best management practices for construction site pollution control shall be a part of regular progress meetings.
 - Information regarding waste management, equipment maintenance and spill prevention shall be prominently posted in the construction trailer.

CONTACT INFORMATION

DNREC 24-Hour Toll Free Number: **800-642-8802**
DNREC Solid & Hazardous Waste Branch: **302-739-9403**

Source: Adapted from USEPA Pub. 840-B-92-002
Symbol:
Detail No: **DE-ESC-3.6.1**
Sheet 5 of 5
Date: 05/15

Standard Detail & Specifications Dust Control

Temporary Methods:

- Mulches - See DE-ESC-3.4.5, Standard Detail and Specifications for Mulching.
- Vegetative cover - See DE-ESC-3.4.3, Std. Detail and Specifications for Vegetative Stabilization.
- Adhesives - Use on mineral soils only not effective on muck soil. Keep traffic off these areas. The following table may be used for general guidance.

Type of Emulsion	Water Dilution	Type of Nozzle	Apply Gal./Ac.
Latex emulsion	12.5:1	Fine spray	235
Resin-in-water emulsion	4:1	Fine spray	300
Acrylic emulsion (non-traffic)	7:1	Coarse spray	450
Acrylic emulsion (traffic)	3.5:1	Coarse spray	350

Permanent Methods:

- Vegetative cover - See DE-ESC-3.4.3, Std. Detail and Specifications for Vegetative Stabilization.
- Stone - Apply layer of crushed stone or coarse gravel to protect soil surface.

Source: Adapted from VA ESC Handbook
Symbol:
Detail No: **DE-ESC-3.4.8**
Sheet 1 of 1
Date: 12/03

Standard Detail & Specifications Topsoiling

Construction Notes:

- Site Preparation** (Where Topsoil is to be added)

Note: When topsoiling, maintain needed erosion and sediment control practices such as diversions, grade stabilization structures, berms, dikes, waterways and sediment basins.

 - Grading - Grades on the areas to be topsoiled which have been previously established shall be maintained.
 - Liming - Where the topsoil is either light or composed of heavy clays, ground limestone shall be spread at the rate of 6 lbs. tons per 1000-4000 pounds per 1000 square feet. Lime shall be distributed uniformly over disturbed areas of soil to be topsoiled in conjunction with tillage operations as described in the following procedures.
 - Tilling - After liming to be topsoiled have been brought to grade, and immediately prior to dragging and spreading the topsoil, the subgrade shall be loosened by dragging or by using any method of tillage to permit topsoil to be worked into the subgrade by passing a bulldozer up and down over the entire surface area of the slope to cross horizontal erosion check dikes to prevent topsoil from sliding down the slope.
- Topsoil Material and Application**

Note: Topsoil salvaged from the existing site may often be reused but it should meet the same standards as that from the specifications. The depth of tillage to be salvaged shall be no more than 100 feet as described in a representative profile for that particular soil type as described in the soil survey published by USDA-SCS in cooperation with Delaware Agricultural Experiment Station.

Compost amendments that are intended to meet specific post-construction stormwater management goals shall further meet the requirements of **Appendix 3.06.2 Post Construction Stormwater Management BMP Standards and Specifications, Section 14.0 Soil Amendments.**

Source: USDA - NRCS
Symbol:
Detail No: **DE-ESC-3.4.1**
Sheet 1 of 2
Date: 05/15

Standard Detail & Specifications Topsoiling

Construction Notes (cont.)

- Materials** - Topsoil shall be a loam, sandy loam, clay loam, silt loam, sandy clay loam, loamy sand or other soil as approved by an agronomist or soil scientist. It shall not have a texture of coarsest textured subsoil and contain no more than 5 percent by volume of boulders, stones, slag, coarse fragments, gravel, sticks, roots, trash or other extraneous materials larger than 1-1/2 inches in diameter. Topsoil must be free of plants or plant parts of weeds, grasses, quackgrass, Johnson grass, nutgrass, poison ivy, thistles, or others as specified. All topsoil shall be tested by a reputable laboratory for organic matter content, pH and soluble salts. A pH of 6.0 to 7.5 and an organic content of not less than 1.5 percent by weight is required. If pH values is less than 6.0 lime shall be applied and incorporated with the topsoil to adjust the pH to 6.5 or higher. Topsoil containing soluble salts greater than 500 parts per million shall not be used.
- No soil or seed shall be placed on soil which has been treated with soil sterilants or chemicals used for weed control until sufficient time has elapsed to permit dissipation of toxic materials.**
- Grading** - The topsoil shall be uniformly distributed and compacted to a minimum of four (4) inches. Spreading shall be performed in such a manner that seeding or sowing can proceed with a minimum of additional soil preparation and tillage. Any irregularities in the surface resulting from topsoiling or other operations shall be corrected in order to prevent the formation of depressions or water pockets. Topsoil shall not be placed where in stream or muddy condition, when the subgrade is excessively wet, or in a condition that may otherwise be detrimental to proper grading and seedbed preparation.

Note: Topsoil substitutes or amendments as approved by a qualified agronomist or soil scientist, may be used in lieu of natural topsoil. Compost material used to improve the percentage of organic matter shall be provided by a certified supplier.

Compost amendments that are intended to meet specific post-construction stormwater management goals shall further meet the requirements of **Appendix 3.06.2 Post Construction Stormwater Management BMP Standards and Specifications, Section 14.0 Soil Amendments.**

Source: USDA - NRCS
Symbol:
Detail No: **DE-ESC-3.4.1**
Sheet 2 of 2
Date: 05/15

Standard Detail & Specifications Vegetative Stabilization

TEMPORARY SEEDING BY RATES, DEPTHS AND DATES

No. #	Species*	Seeding Rate	Optimum Seeding Dates†	Planting Depth‡
1	Certified Seed	125 Lb/A	10/15/15 - 11/15/15	1/2" - 1" (100% - 100%)
2	Soil	125 Lb/A	10/15/15 - 11/15/15	1/2" - 1" (100% - 100%)
3	Soil	125 Lb/A	10/15/15 - 11/15/15	1/2" - 1" (100% - 100%)
4	Soil	125 Lb/A	10/15/15 - 11/15/15	1/2" - 1" (100% - 100%)
5	Soil	125 Lb/A	10/15/15 - 11/15/15	1/2" - 1" (100% - 100%)
6	Soil	125 Lb/A	10/15/15 - 11/15/15	1/2" - 1" (100% - 100%)
7	Soil	125 Lb/A	10/15/15 - 11/15/15	1/2" - 1" (100% - 100%)
8	Soil	125 Lb/A	10/15/15 - 11/15/15	1/2" - 1" (100% - 100%)

Source: Delaware ESC Handbook
Symbol:
Detail No: **DE-ESC-3.4.3**
Sheet 1 of 4
Date: 12/03

Standard Detail & Specifications Vegetative Stabilization

PERMANENT SEEDING AND SEEDING DATES

No. #	Certified Seed	Seeding Rate	Optimum Seeding Dates	Planting Depth	Remarks
1	Grass Seed Blend	125 Lb/A	10/15/15 - 11/15/15	1/2" - 1" (100% - 100%)	Grass seed blend consisting of 50% Fescue and 50% Ryegrass. Seed shall be certified seed.
2	Grass Seed Blend	125 Lb/A	10/15/15 - 11/15/15	1/2" - 1" (100% - 100%)	Grass seed blend consisting of 50% Fescue and 50% Ryegrass. Seed shall be certified seed.
3	Grass Seed Blend	125 Lb/A	10/15/15 - 11/15/15	1/2" - 1" (100% - 100%)	Grass seed blend consisting of 50% Fescue and 50% Ryegrass. Seed shall be certified seed.
4	Grass Seed Blend	125 Lb/A	10/15/15 - 11/15/15	1/2" - 1" (100% - 100%)	Grass seed blend consisting of 50% Fescue and 50% Ryegrass. Seed shall be certified seed.
5	Grass Seed Blend	125 Lb/A	10/15/15 - 11/15/15	1/2" - 1" (100% - 100%)	Grass seed blend consisting of 50% Fescue and 50% Ryegrass. Seed shall be certified seed.
6	Grass Seed Blend	125 Lb/A	10/15/15 - 11/15/15	1/2" - 1" (100% - 100%)	Grass seed blend consisting of 50% Fescue and 50% Ryegrass. Seed shall be certified seed.
7	Grass Seed Blend	125 Lb/A	10/15/15 - 11/15/15	1/2" - 1" (100% - 100%)	Grass seed blend consisting of 50% Fescue and 50% Ryegrass. Seed shall be certified seed.
8	Grass Seed Blend	125 Lb/A	10/15/15 - 11/15/15	1/2" - 1" (100% - 100%)	Grass seed blend consisting of 50% Fescue and 50% Ryegrass. Seed shall be certified seed.

Source: Delaware ESC Handbook
Symbol:
Detail No: **DE-ESC-3.4.3**
Sheet 2 of 4
Date: 12/03

Standard Detail & Specifications Vegetative Stabilization

PERMANENT SEEDING AND SEEDING DATES (cont.)

No. #	Certified Seed	Seeding Rate	Optimum Seeding Dates	Planting Depth	Remarks
9	Grass Seed Blend	125 Lb/A	10/15/15 - 11/15/15	1/2" - 1" (100% - 100%)	Grass seed blend consisting of 50% Fescue and 50% Ryegrass. Seed shall be certified seed.
10	Grass Seed Blend	125 Lb/A	10/15/15 - 11/15/15	1/2" - 1" (100% - 100%)	Grass seed blend consisting of 50% Fescue and 50% Ryegrass. Seed shall be certified seed.
11	Grass Seed Blend	125 Lb/A	10/15/15 - 11/15/15	1/2" - 1" (100% - 100%)	Grass seed blend consisting of 50% Fescue and 50% Ryegrass. Seed shall be certified seed.
12	Grass Seed Blend	125 Lb/A	10/15/15 - 11/15/15	1/2" - 1" (100% - 100%)	Grass seed blend consisting of 50% Fescue and 50% Ryegrass. Seed shall be certified seed.
13	Grass Seed Blend	125 Lb/A	10/15/15 - 11/15/15	1/2" - 1" (100% - 100%)	Grass seed blend consisting of 50% Fescue and 50% Ryegrass. Seed shall be certified seed.
14	Grass Seed Blend	125 Lb/A	10/15/15 - 11/15/15	1/2" - 1" (100% - 100%)	Grass seed blend consisting of 50% Fescue and 50% Ryegrass. Seed shall be certified seed.
15	Grass Seed Blend	125 Lb/A	10/15/15 - 11/15/15	1/2" - 1" (100% - 100%)	Grass seed blend consisting of 50% Fescue and 50% Ryegrass. Seed shall be certified seed.

Source: Delaware ESC Handbook
Symbol:
Detail No: **DE-ESC-3.4.3**
Sheet 3 of 4
Date: 12/03

Standard Detail & Specifications Vegetative Stabilization

Construction Notes:

- Site Preparation**
 - Prior to seeding, install needed erosion and sediment control practices such as diversions, grade stabilization structures, berms, dikes, grassed waterways, and sediment basins.
 - Final grading and shaping is not necessary for temporary seedings.
- Seedbed Preparation**

It is important to prepare a good seedbed to insure the success of establishing vegetation. The seedbed should be well prepared, loose, uniform, and free of large clods, rocks, and other objectionable material. The soil surface should not be compacted or crusted.
- Soil Amendments**
 - Lime - Apply liming materials based on the recommendations of a soil test in accordance with the approved nutrient management plan. If a nutrient management plan is not required, apply dolomitic limestone at the rate of 1 to 2 tons per acre. Apply limestone uniformly and incorporate into the top 4 to 6 inches of soil.
 - Fertilizer - Apply fertilizer based on the recommendations of a soil test in accordance with the approved nutrient management plan. If a nutrient management plan is not required, apply a formulation of 10-10-10 or the rate of 600 pounds per acre. Apply fertilizer uniformly and incorporate into the top 4 to 6 inches of soil.
- Seeding**
 - For temporary stabilization, select a mixture from **Sheet 1**. For permanent stabilization, select a mixture from **Sheet 2** or **Sheet 3** depending on the conditions.
 - Apply seed uniformly with a broadcast seeder, dike, outdragger seeder or hydroseeder. All seed will be applied at the recommended rate and planting depth.
 - Seed that has been broadcast should be covered by raking or dragging and then lightly tamped into place using a roller or outdragger. 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.
- Mulching**

All mulching shall be done in accordance with detail **DE-ESC-3.4.5**.

Source: Delaware ESC Handbook
Symbol:
Detail No: **DE-ESC-3.4.3**
Sheet 4 of 4
Date: 12/03



ARCHITECTURE
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309 S. Governors Ave.
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312 West Main St. Suite 300
Salisbury, MD 21801
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Wilmington, NC
3205 Randall Parkway, Suite 211
Wilmington, North Carolina 28403
Ph. 910.341.7600
Fax 910.341.7506

www.beckermorgan.com



PROJECT TITLE
APPLICATION NO. 2017-0445

CONRAD
SCHOOLS OF
SCIENCE:
ATHLETIC
FIELDS

201 JACKSON AVE.
WILMINGTON, DE 19804
NEW CASTLE COUNTY

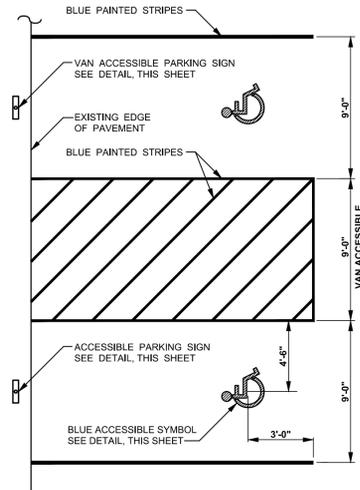
SHEET TITLE

EROSION AND
SEDIMENT
CONTROL DETAILS

ISSUE BLOCK

MARK	DATE	DESCRIPTION
LAYER STATE	C-503	
PROJECT NO.:	2013222.01	
DATE:	6/30/17	
SCALE:	AS SHOWN	
DRAWN BY:	R.J.M. / PROJ. MGR.: J.S.F.	

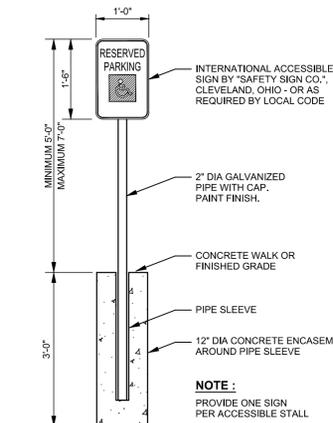
C-503
COPYRIGHT: 2015



NOTE:
EXISTING PARKING SPACES SHALL BE RE-PAINTED BLUE AT LOCATIONS SHOWN.
PAINT ACCESSIBLE SYMBOL AS DETAILED ON EACH ACCESSIBLE SPACE.

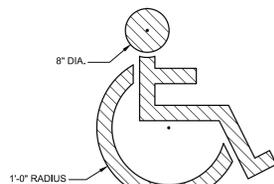
ACCESSIBLE PARKING SPACE PLAN

NO SCALE BMG NO.: SW-4B



ACCESSIBLE PARKING SIGN & POLE DETAIL

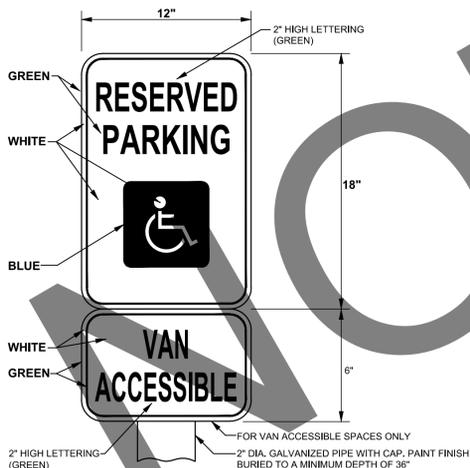
NO SCALE BMG NO.: SW-4D



NOTES:
1. SYMBOL SHALL BE 4" WIDE (MIN.) AND PAINTED BLUE ON EACH ACCESSIBLE SPACE.
2. HANDICAPPED SPACES SHALL BE 9'-0" WIDE.

ACCESSIBLE SYMBOL DETAIL

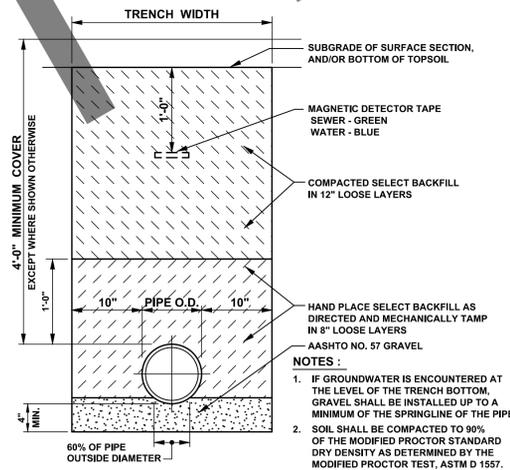
NO SCALE BMG NO.: SW-4E



NOTES:
1. THE BOTTOM EDGE OF SIGN SHALL BE A MINIMUM OF 5.0' AND A MAXIMUM OF 7.0' ABOVE FINISHED GRADE. CONTRACTOR SHALL INSTALL ONE SIGN PER ACCESSIBLE PARKING SPACE. SIGNS ARE TO BE CENTERED ON STALL WIDTH FACING PARKING.
2. THE SIGN BE IN ACCORDANCE WITH THE STANDARDS AND SPECIFICATIONS AS DEFINED BY THE CURRENT AMERICANS WITH DISABILITIES ACT (ADA) REGULATIONS.

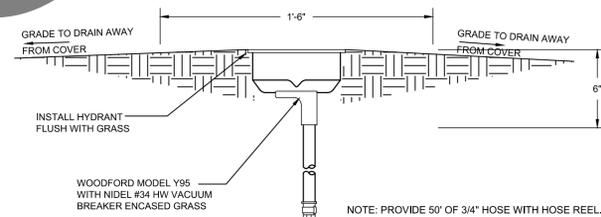
VAN ACCESSIBLE PARKING SIGN DETAIL

NO SCALE BMG NO.: SW-4C-2



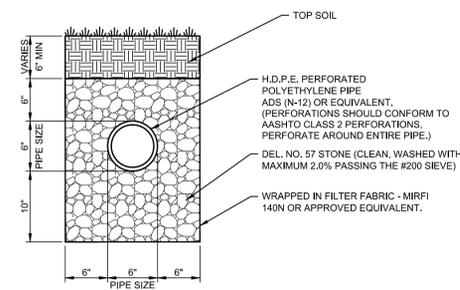
PIPE TRENCH DETAIL - WATER MAIN

NO SCALE BMG NO.: W-02



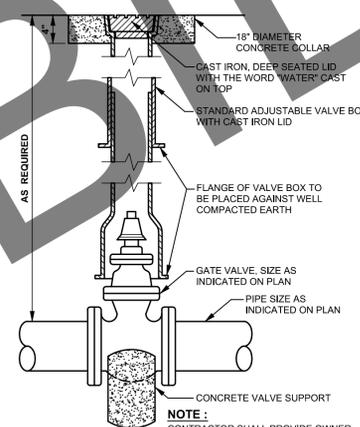
YARD HYDRANT DETAIL

NO SCALE BMG NO.: W-1



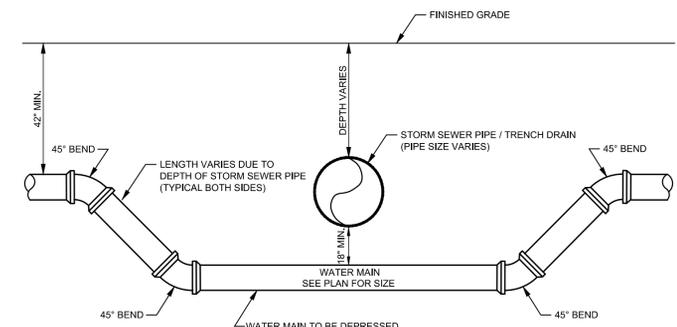
PERFORATED PIPE INFILTRATION TRENCH DETAIL

1" = 1' BMG NO.: SD-6B



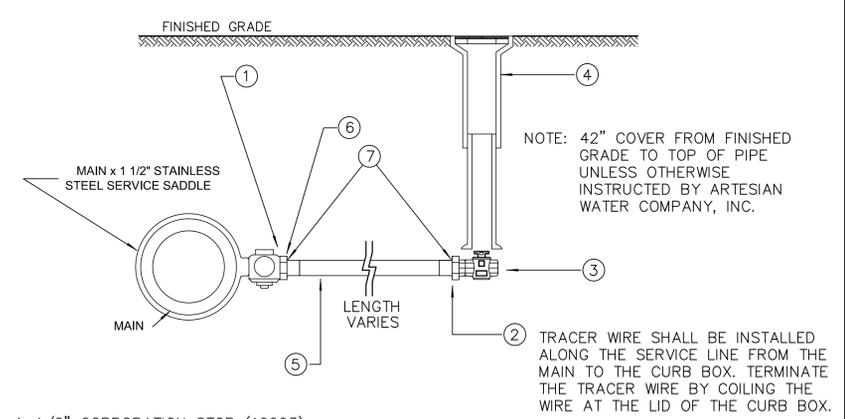
GATE VALVE DETAIL

NO SCALE BMG NO.: W-03



WATER MAIN / STORM SEWER CROSSING DETAIL

NO SCALE BMG NO.: W-12



- 1-1/2" CORPORATION STOP (10003)
- 2" MALE X COMPRESSION ADAPTER (15428)
- 2" CURB STOP (B20283)
- VALVE BOX (5564-S)
- 2" CTS PE
- 2" FEMALE X COMPRESSION ADAPTER (15451)
- 2" INSERT (2 SSINSERT)

NOTE: SPECIFICATIONS DUE TO CHANGE WITHOUT NOTICE. CONTACT ARTESIAN WATER COMPANY, INC. FOR LATEST REVISION.

NOT TO SCALE
SERVICE DETAILS/ACCOUNTING DETAILS/2 CTS PE SERVICE

ARTESIAN WATER COMPANY, INC.
664 Churchman Road
Newark, Delaware 19702
P.O. Box 942
Bethany Beach, Delaware 19959
Phone: (302) 651-9900 Fax: (302) 651-5300



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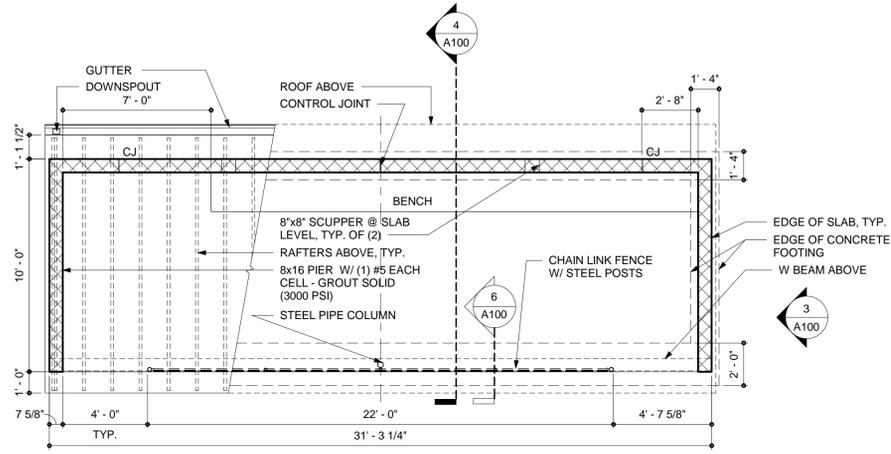
PROJECT TITLE
APPLICATION NO. 2017-0445

CONRAD SCHOOLS OF SCIENCE: ATHLETIC FIELDS

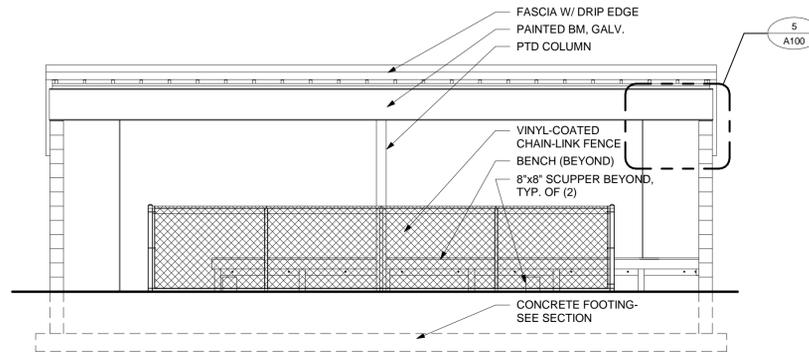
201 JACKSON AVE.
WILMINGTON, DE 19804
NEW CASTLE COUNTY

CONSTRUCTION DETAILS

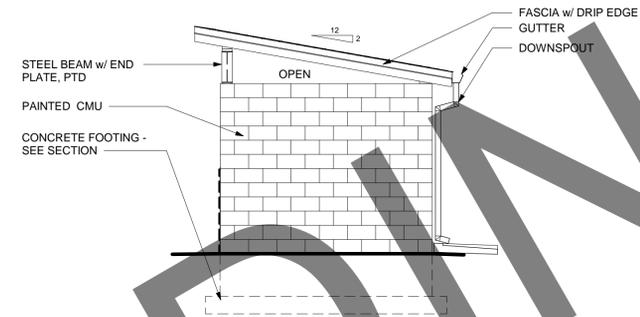
MARK	DATE	DESCRIPTION
LAYER STATE	C-093	
PROJECT NO.:	2013222.01	
DATE:	6/30/17	
SCALE:	AS SHOWN	
DRAWN BY:	R.J.M.	PROJ. MGR.: J.S.F.
SHEET		
C-903		
COPYRIGHT 2015		



1 DUGOUT PLAN
SCALE: 1/4" = 1'-0"

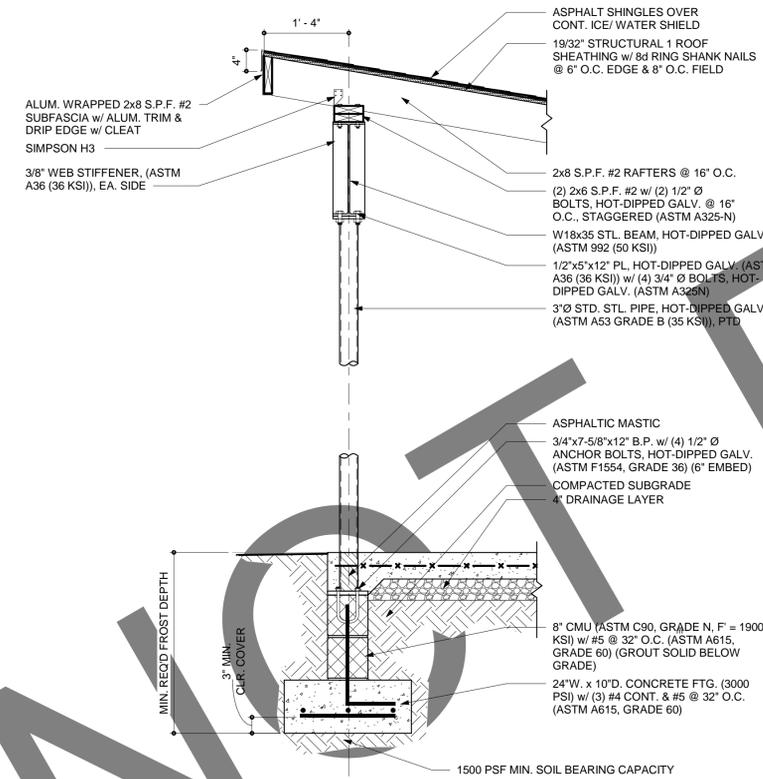


2 DUGOUT FRONT ELEVATION
SCALE: 1/4" = 1'-0"

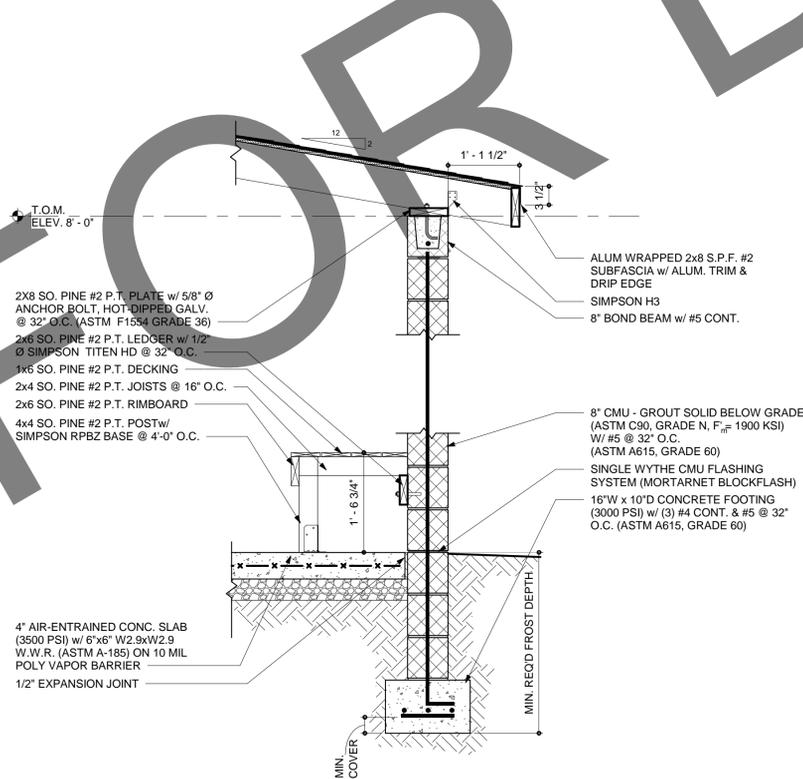


3 DUGOUT SIDE ELEVATION
SCALE: 1/4" = 1'-0"

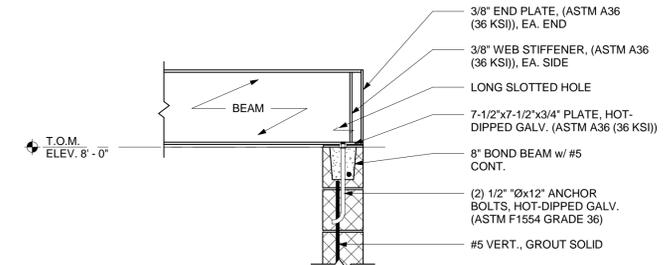
NOTES:
1. PROVIDE KEYPED, VERTICAL CONTROL JOINTS IN MASONRY WALLS PER PLAN, NOT TO EXCEED 40 FT. O.C.
2. INSTALL GUTTERS AND DOWNSPOUTS ACCORDING TO INDUSTRY AND MANUFACTURERS STANDARDS.



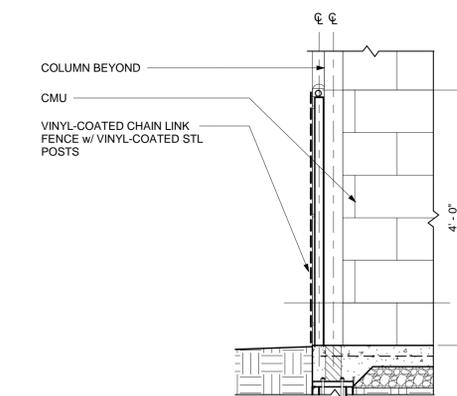
4 STRUCTURAL WALL AND BEAM SECTION
SCALE: 3/4" = 1'-0"



5 CMU BEARING ELEVATION
SCALE: 3/4" = 1'-0"

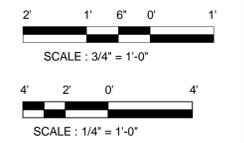


6 CHAIN LINK FENCE SECTION DETAIL
SCALE: 3/4" = 1'-0"



PROJECT TITLE
**CONRAD
SCHOOLS OF
SCIENCE:
ATHLETIC
FIELDS**
201 JACKSON AVENUE
WILMINGTON, DE 19804
CHRISTIANA HUNDRED

SHEET TITLE
**DUGOUT PLANS,
SECTIONS & DETAILS**



ISSUE BLOCK

Mark	Date	Description
PROJECT NO:	2013222.01	
DATE:	10/23/2017	
SCALE:	As indicated	
DRAWN BY:	JAF3	PROJ MGR: JML



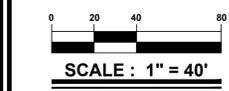
PROJECT TITLE
APPLICATION NO.

CONRAD SCHOOLS OF SCIENCE: ATHLETIC FIELDS PHASE 2

201 JACKSON AVE.
WILMINGTON, DE 19804
CHRISTIANA HUNDRED

SHEET TITLE

SITE PLAN



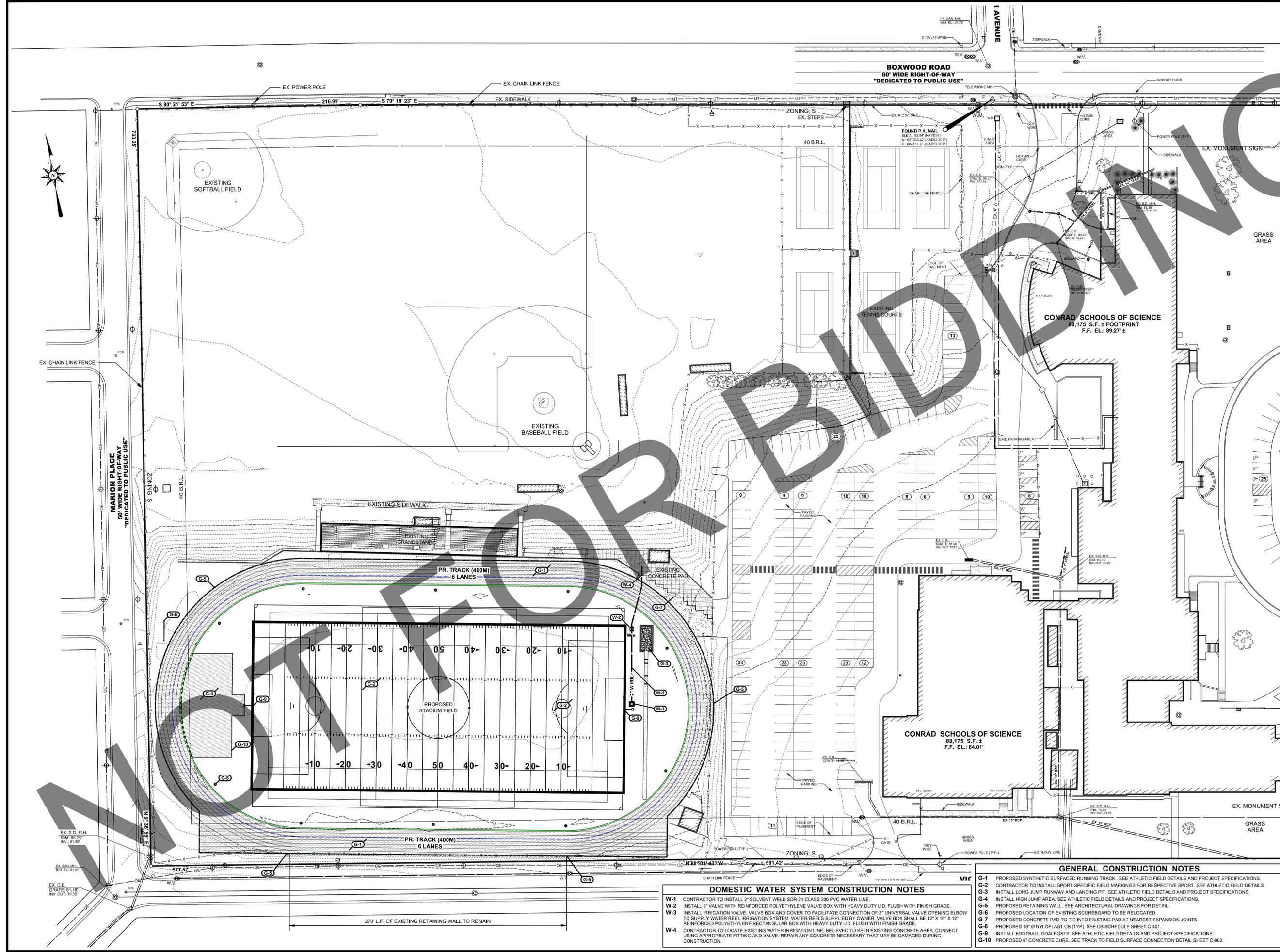
ISSUE BLOCK

MARK	DATE	DESCRIPTION
LAYER STATE: C-201		

PROJECT NO.: 2013222.01
DATE: 6/30/17
SCALE: 1" = 40'

DRAWN BY: A.P.C. PROJ. MGR.: J.S.F.
SHEET

C-201
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DOMESTIC WATER SYSTEM CONSTRUCTION NOTES

W-1 CONTRACTOR TO INSTALL 2" SOLVENT WELD SDR-21 CLASS 200 PVC WATER LINE.
W-2 INSTALL 2" VALVE WITH REINFORCED POLYETHYLENE VALVE BOX WITH HEAVY DUTY LID, FLUSH WITH FINISH GRADE.
W-3 INSTALL IRRIGATION VALVE, VALVE BOX AND COVER TO FACILITATE CONNECTION OF 2" UNIVERSAL VALVE OPENING ELBOW TO SUPPLY WATER REEL IRRIGATION SYSTEM. WATER REELS SUPPLIED BY OWNER. VALVE BOX SHALL BE 12" X 18" X 12" REINFORCED POLYETHYLENE RECTANGULAR BOX WITH HEAVY DUTY LID, FLUSH WITH FINISH GRADE.
W-4 CONTRACTOR TO LOCATE EXISTING WATER IRRIGATION LINE, BELIEVED TO BE IN EXISTING CONCRETE AREA. CONNECT USING APPROPRIATE FITTING AND VALVE. REPAIR ANY CONCRETE NECESSARY THAT MAY BE DAMAGED DURING CONSTRUCTION.

GENERAL CONSTRUCTION NOTES

G-1 PROPOSED SYNTHETIC SURFACED RUNNING TRACK - SEE ATHLETIC FIELD DETAILS AND PROJECT SPECIFICATIONS.
G-2 CONTRACTOR TO INSTALL SPORT SPECIFIC FIELD MARKINGS FOR RESPECTIVE SPORT. SEE ATHLETIC FIELD DETAILS.
G-3 INSTALL LONG JUMP RUNWAY AND LANDING PIT. SEE ATHLETIC FIELD DETAILS AND PROJECT SPECIFICATIONS.
G-4 INSTALL HIGH JUMP AREA. SEE ATHLETIC FIELD DETAILS AND PROJECT SPECIFICATIONS.
G-5 PROPOSED RETAINING WALL. SEE ARCHITECTURAL DRAWINGS FOR DETAIL.
G-6 PROPOSED LOCATION OF EXISTING SCOREBOARD TO BE RELOCATED.
G-7 PROPOSED CONCRETE PAD TO TIE INTO EXISTING PAD AT NEAREST EXPANSION JOINTS.
G-8 PROPOSED 18" Ø NYLOPLAST CB (TYP). SEE CB SCHEDULE SHEET C-401.
G-9 INSTALL FOOTBALL GOALPOSTS. SEE ATHLETIC FIELD DETAILS AND PROJECT SPECIFICATIONS.
G-10 PROPOSED 6" CONCRETE CURB. SEE TRACK TO FIELD SURFACE CONNECTION DETAIL SHEET C-202.



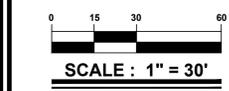
PROJECT TITLE
APPLICATION NO.

CONRAD SCHOOLS OF SCIENCE: ATHLETIC FIELDS PHASE 2

201 JACKSON AVE.
WILMINGTON, DE 19804
CHRISTIANA HUNDRED

SHEET TITLE

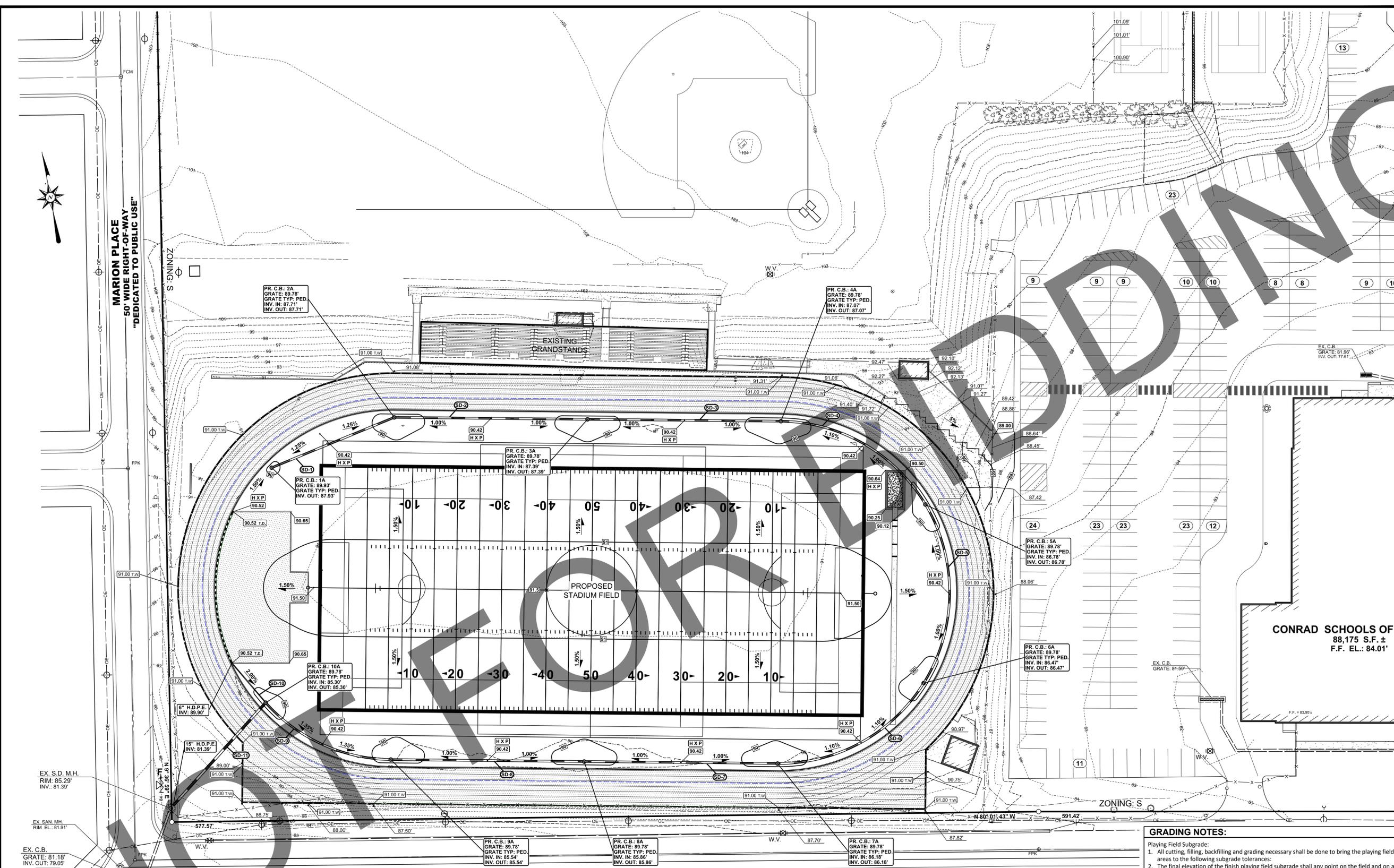
GRADING & UTILITY PLAN



MARK	DATE	DESCRIPTION

PROJECT NO.: 2013222.01
DATE: 6/30/17
SCALE: 1" = 30'
DRAWN BY: A.P.C. PROJ. MGR.: J.S.F.

SHEET
C-401
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STORM DRAIN PIPE SCHEDULE

PIPE NO.	SIZE	PIPE TYPE	LENGTH	SLOPE	INV. IN	INV. OUT
SD-1	12"	HDPE	88'	0.25%	-	87.93'
SD-2	12"	HDPE	128'	0.25%	87.71'	87.39'
SD-3	12"	HDPE	128'	0.25%	87.39'	87.07'
SD-4	12"	HDPE	116'	0.25%	87.07'	86.78'
SD-5	12"	HDPE	124'	0.25%	86.78'	86.47'
SD-6	12"	HDPE	116'	0.25%	86.47'	86.18'
SD-7	12"	HDPE	128'	0.25%	86.18'	85.86'
SD-8	12"	HDPE	128'	0.25%	85.86'	85.54'
SD-9	12"	HDPE	96'	0.25%	85.54'	85.30'
SD-10	6"	HDPE	34'	13.50%	89.90'	85.30'
SD-11	15"	HDPE	91'	4.30%	85.30'	81.39'

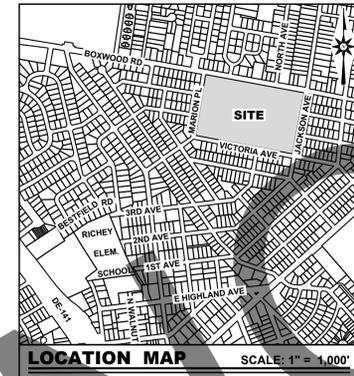
CATCH BASIN SCHEDULE

CB NO.	INLET BOX	COVER SLAB	TOP UNIT	FRAME/GRATE	GRATE EL.	INV. IN	INV. OUT
CB-1	18" NYLOPLAST	-	DUCTILE IRON	18" PEDESTRIAN	89.93'	-	87.93' (SD-1)
CB-2	18" NYLOPLAST	-	DUCTILE IRON	18" PEDESTRIAN	89.78'	87.71' (SD-1)	87.71' (SD-2)
CB-3	18" NYLOPLAST	-	DUCTILE IRON	18" PEDESTRIAN	89.78'	87.39' (SD-2)	87.39' (SD-3)
CB-4	18" NYLOPLAST	-	DUCTILE IRON	18" PEDESTRIAN	89.78'	87.07' (SD-3)	87.07' (SD-4)
CB-5	18" NYLOPLAST	-	DUCTILE IRON	18" PEDESTRIAN	89.78'	86.78' (SD-4)	86.78' (SD-5)
CB-6	18" NYLOPLAST	-	DUCTILE IRON	18" PEDESTRIAN	89.78'	86.47' (SD-5)	86.47' (SD-6)
CB-7	18" NYLOPLAST	-	DUCTILE IRON	18" PEDESTRIAN	89.78'	86.18' (SD-6)	86.18' (SD-7)
CB-8	18" NYLOPLAST	-	DUCTILE IRON	18" PEDESTRIAN	89.78'	85.86' (SD-7)	85.86' (SD-8)
CB-9	18" NYLOPLAST	-	DUCTILE IRON	18" PEDESTRIAN	89.78'	85.54' (SD-8)	85.54' (SD-9)
CB-10	18" NYLOPLAST	-	DUCTILE IRON	18" PEDESTRIAN	89.78'	85.30' (SD-9)	85.30' (SD-10)

GRADING NOTES:

- Playing Field Subgrade: All cutting, filling, backfilling and grading necessary shall be done to bring the playing field areas to the following subgrade tolerances:
 - The final elevation of the finished grades shall be indicated on the Contract Drawings. Laser controlled or indicated equipment shall be used for this part of the work. Playing Field Subgrade Certification: A certified survey by a State licensed land surveyor shall be performed at 25-foot centers to verify grade and elevation of the subgrade. The digital survey document shall indicate spot elevations and tenth of foot contours and shall be submitted to the Engineer for review and approval prior to moving to next part of work.
 - After verification and approval of the subgrade, the Playing Field Contractor shall then proceed with the fine grading of the subgrade. All fine grade cutting, filling, and backfilling necessary to be performed on the subgrade to bring the playing field areas finish subgrade to the required tolerances. Finish subgrade shall regard to slope except where noted on the drawings. Compaction for the finish subgrade shall in section 3.2 of this Specification. Proofrolling of the finish subgrade is required. Sufficient grading must be done during the progress of the work's site shall be well drained and free from water pockets.
- Playing Field Finish Subgrade Tolerance Requirements: The final elevation of the finish subgrade shall be plus or minus one half inch at any point on the field and on a 25 foot by 25 foot grid as indicated on the Contract Drawings.
- Playing Field Finish Subgrade Elevation Certification: A certified survey licensed land surveyor shall be performed at 25-foot centers to verify required grade and elevation tolerances of the finish subgrade. The digital survey document shall indicate spot elevations and tenth of foot contours and shall be submitted to the Engineer for review and approval prior to moving to next part of work.

CONRAD SCHOOLS OF SCIENCE: ATHLETIC FIELDS



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Wilmington, North Carolina 28403
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Fax 910.341.7506
www.beckermorgan.com

AREA OF DISTURBANCE	
TOTAL : 4.21 ACRES	

SWM MAINTENANCE AGREEMENT
THE MAINTENANCE OF STORMWATER MANAGEMENT FACILITIES ON-SITE, INCLUDING THE STORM DRAIN SYSTEM, DITCHES, SWALES, PONDS, PERVIOUS CONCRETE, ETC. SHALL BE THE RESPONSIBILITY OF THE OWNER POST CONSTRUCTION.

SEDIMENT AND STORMWATER CONSTRUCTION NOTES:

- 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 STORM WATER MANAGEMENT PLAN.
- REVIEW AND OR APPROVAL OF THE SEDIMENT AND STORM WATER MANAGEMENT PLAN SHALL NOT RELIEVE THE CONTRACTOR FROM HIS OR HER RESPONSIBILITIES FOR COMPLIANCE WITH THE REQUIREMENTS OF THE SEDIMENT AND STORM WATER REGULATIONS. NOR SHALL IT RELIEVE THE CONTRACTOR FROM ERRORS OR OMISSIONS IN THE APPROVED PLAN.
- IF THE APPROVED PLAN NEEDS TO BE MODIFIED, ADDITIONAL SEDIMENT AND STORM WATER CONTROL MEASURES MAY BE REQUIRED AS DEEMED NECESSARY BY DNREC.
- FOLLOWING SOIL DISTURBANCE OR RE-DISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED FOR ALL PERIMETER SEDIMENT CONTROL DIKES, SWALES, DITCHES, PERIMETER SLOPES, STOCKPILES, AND ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE WITHIN FOURTEEN (14) CALENDAR DAYS UNLESS MORE RESTRICTIVE FEDERAL REQUIREMENTS APPLY.
- ALL EROSION AND SEDIMENT CONTROL PRACTICES SHALL COMPLY WITH THE DELAWARE EROSION CONTROL HANDBOOK, LATEST EDITION.
- ALL SITE DEWATERING SHALL BE DONE THROUGH AN APPROVED FILTRATION DEVICE AND PREVIOUSLY APPROVED BY THE AGENCY CONSTRUCTION SITE REVIEWER FOR THE NON-EROSIVE POINT OF DISCHARGE, AND A DEWATERING PERMIT SHALL BE APPROVED BY DNREC WELL PERMITTING BRANCH.
- THE APPROVAL FOR THIS SITE IS VALID FOR FIVE (5) YEARS FROM THE APPROVAL DATE STAMPED ON THE PLAN BY DNREC.
- POST CONSTRUCTION VERIFICATION DOCUMENTS ARE TO BE SUBMITTED TO DNREC SEDIMENT AND STORMWATER PROGRAM WITHIN 90 DAYS OF STORMWATER MANAGEMENT FACILITY COMPLETION. POST CONSTRUCTION VERIFICATION DOCUMENTS ARE TO INCLUDE STORMWATER AS-BUILTS WHICH ARE SIGNED AND SEALED BY A PROFESSIONAL LAND SURVEYOR AND SHOULD BE PROVIDED BY THE CONTRACTOR.
- APPROVAL OF A SEDIMENT AND STORM WATER PLAN SHALL NOT GRANT OR IMPLY A RIGHT TO DISCHARGE STORM WATER RUNOFF. THE OWNER/DEVELOPER IS RESPONSIBLE FOR ACQUIRING ANY AND ALL AGREEMENTS, EASEMENTS, ETC., NECESSARY TO COMPLY WITH STATE DRAINAGE AND OTHER APPLICABLE LAWS.
- THE NOTICE OF INTENT FOR STORMWATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITY UNDER A NPDES GENERAL PERMIT FOR THIS PROJECT IS # **5566**. AT ANY TIME THE OWNERSHIP FOR THIS PROJECT CHANGES, A TRANSFER OF AUTHORIZATION OR A CO-PERMITTEE APPLICATION MUST BE SUBMITTED TO DNREC. THE PERMITTEE OF RECORD SHALL NOT BE RELIEVED OF THEIR RESPONSIBILITY UNTIL A NOTICE OF TERMINATION HAS BEEN PROCESSED BY DNREC.
- THE OWNER SHALL BE FAMILIAR WITH AND COMPLY WITH ALL ASPECTS OF THE NPDES CONSTRUCTION GENERAL PERMIT ASSOCIATED WITH THE PROJECT, INCLUDING BUT NOT LIMITED TO, PERFORMING WEEKLY SITE INSPECTION DURING THE CONSTRUCTION AND AFTER RAIN EVENTS AND MAINTAINING WRITTEN LOGS OF THESE INSPECTIONS.
- BEFORE ANY EARTHWORK OR EXCAVATION TAKES PLACE THE CONTRACTOR SHALL CALL MISS UTILITY AT 811 OR 1800-282-8555 AT LEAST 48 HOURS PRIOR TO CONSTRUCTION, TO HAVE ALL EXISTING UTILITY MARKED ONSITE.
- THE CONTRACTOR SHALL AT ALL TIMES PROTECT AGAINST SEDIMENT OR DEBRIS LADEN RUNOFF OR WIND FROM LEAVING THE SITE. PERIMETER CONTROL SHALL BE CHECKED DAILY AND ADJUSTED AND/OR REPAIRED TO FULLY CONTAIN AND CONTROL SEDIMENT FROM LEAVING THE SITE. ACCUMULATED SEDIMENT SHALL BE REMOVED WITHIN 11 HOURS OF REACHED HALF OF THE EFFECTIVE CAPACITY OF THE CONTROL. IN ADDITION THE CONTRACTOR MAY NEED TO ADJUST OR ALTER MEASURES IN TIME OF ADVERSE WEATHER CONDITIONS, OR AS DIRECTED BY THE AGENCY CONSTRUCTION SITE REVIEWER.
- BEST AVAILABLE TECHNOLOGY (BAT) SHALL BE EMPLOYED TO MANAGE TURBID DISCHARGES IN ACCORDANCE WITH REQUIREMENT OF 7. DEL. C. CH60, REGULATIONS GOVERNING THE CONTROL OF WATER POLLUTION, SECTION 9.1.02, KNOWN AS SPECIAL CONDITIONS FOR STORMWATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITIES, AND DEPARTMENT POLICIES, PROCEDURES AND GUIDANCE.
- DOCUMENTATION OF SOIL TESTING AND MATERIAL 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 AND THE STANDARDS AND SPECIFICATION OF THE DELAWARE EROSION AND SEDIMENT CONTROL HANDBOOK, LATEST EDITION. THE DEPARTMENT OR DELEGATED AGENCY SHALL HAVE THE DISCRETION TO REQUIRE ADDITIONAL SOIL TESTING AND REAPPLICATION OF PERMANENT OR TEMPORARY STABILIZATION IN ACCORDANCE WITH THE SPECIFICATION PROVIDED IN THE DELAWARE EROSION AND SEDIMENT CONTROL HANDBOOK, LATEST EDITION, OR ALTERNATIVE MEASURE THAT PROVIDE FUNCTIONAL EQUIVALENCY.
- PERIODIC MAINTENANCE OF ALL SEDIMENT CONTROL MEASURES IS REQUIRED TO INSURE EFFECTIVE SEDIMENT CONTROL. INSPECTION OF ALL SEDIMENT AND EROSION CONTROL MEASURES SHALL BE MADE AT LEAST WEEKLY AND AFTER EACH RAINFALL EVENT. REPAIRS SHALL BE THE CONTRACTORS RESPONSIBILITY AND MADE WITHIN 24 HOURS OF THE RAIN EVENT OR WHEN OTHERWISE IDENTIFIED.
- ALL EROSION AND SEDIMENT CONTROL PRACTICES SHALL CONFORM TO DELAWARE EROSION AND SEDIMENT CONTROL HANDBOOK, LATEST EDITION.
- THE SEQUENCE OF CONSTRUCTION ON THE APPROVED SEDIMENT AND STORMWATER MANAGEMENT PLAN MUST BE STRICTLY ADHERED. ANY DIVERGENCE FROM THE APPROVED CONSTRUCTION SEQUENCE REQUIRES A WRITTEN REQUEST TO MODIFY AND THE WRITTEN APPROVAL OF DNREC.
- A COPY OF THE APPROVED SEDIMENT AND STORMWATER MANAGEMENT PLANS MUST BE MAINTAINED ON-SITE AT ALL TIMES DURING CONSTRUCTION.
- TO PREVENT OR REDUCE THE MOVEMENT OF DUST FROM DISTURBED SOIL SURFACES THE SITE SHALL BE SPRINKLED WITH WATER UNTIL THE SURFACE IS MOIST AND REPEATED AS NECESSARY. ALTERNATIVE METHODS OF DUST CONTROL REQUIRE APPROVAL OF DNREC.
- IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO MAINTAIN AND REPAIR ALL EROSION AND SEDIMENT CONTROL AND STORMWATER MANAGEMENT PRACTICES DURING UTILITY INSTALLATION.
- ALL POINTS OF CONSTRUCTION INGRESS AND EGRESS SHALL BE PROTECTED TO PREVENT TRACKING OF MUD ONTO PUBLIC WAYS BY A STABILIZED CONSTRUCTION ENTRANCE.
- IF THE APPROVED PLAN NEEDS TO BE MODIFIED, ADDITIONAL SEDIMENT AND STORM WATER CONTROL MEASURES MAY BE REQUIRED AS DEEMED NECESSARY BY DNREC.
- A PRE-CONSTRUCTION MEETING MUST TAKE PLACE BEFORE ANY EARTH DISTURBING ACTIVITY BEGINS. THE MEETING MUST BE ATTENDED BY AN OWNER'S REPRESENTATIVE, CONTRACTOR, CCR (IF REQUIRED FOR THE SITE), AND DNREC INSPECTOR.
- DNREC RESERVES THE RIGHT TO ENTER PRIVATE PROPERTY FOR PURPOSES OF PERIODIC SITE INSPECTION.
- SOIL STOCKPILE AREAS MUST BE DELINEATED. LOCATE STOCKPILES ON AREAS WITH LITTLE OR NO SLOPE. STOCKPILES MUST BE SURROUNDED WITH SILT FENCE OR A STABILIZED EARTHEN BERM. STOCKPILE AREAS MUST BE SEEDED WITH TEMPORARY SEEDING MIXTURE AND MULCHED.
- DNREC RESERVES THE RIGHT TO WITHHOLD PERMITS AND LETTERS OF NO OBJECTION RELATED TO OBTAINING CERTIFICATES OF OCCUPANCY FROM THE LOCAL JURISDICTION FOR NON COMPLIANCE WITH THE PLANS AND SPECIFICATIONS FOR STORMWATER MANAGEMENT AND EROSION AND SEDIMENT CONTROL.
- DNREC RESERVES THE RIGHT TO ADD, DELETE, MODIFY OR OTHERWISE ALTER THE SEDIMENT CONTROL PROVISIONS OF THIS PLAN IN THE EVENT ADDITIONAL PROTECTION BECOMES NECESSARY.
- THE CONTRACTOR IS RESPONSIBLE FOR MAINTENANCE OF ALL SEDIMENT AND EROSION CONTROL MEASURES DURING CONSTRUCTION.
- ALL TEMPORARY STOCKPILES ARE TO BE LOCATED ON AREAS WITH LITTLE OR NO SLOPE AND PROTECTED BY SILT FENCE OR A STABILIZED EARTHEN BERM AND ARE TO BE TEMPORARILY STABILIZED.
- EROSION AND SEDIMENT CONTROL WILL BE STRICTLY ENFORCED.
- SEDIMENT CONTROL FOR UTILITY CONSTRUCTION IN AREAS OUTSIDE OF DESIGNED CONTROLS:
 - EXCAVATED TRENCH MATERIAL SHALL BE PLACED ON THE HIGH SIDE OF THE TRENCH.
 - IMMEDIATELY FOLLOWING PIPE INSTALLATION THE TRENCH SHALL BE BACK FILLED, COMPACTED AND STABILIZED.
 - TEMPORARY SILT FENCE OR STRAW BALE DIKES SHALL BE PLACED IMMEDIATELY DOWNSTREAM OF ANY DISTURBED AREA INTENDED TO REMAIN DISTURBED LONGER THAN ONE WORKING DAY.
- EROSION CONTROL MATTING IS REQUIRED ON SLOPES OF 3:1 OR GREATER IN AREAS OF CONCENTRATED FLOW. MATTING TYPE IS TO BE SSM-11 NORTH AMERICAN GREEN S150BN (OR APPROVED EQUIVALENT)
- ALL PERIMETER CONTROLS ARE TO BE REVIEWED BY DNREC SITE INSPECTOR AND APPROVED PRIOR TO PROCEEDING WITH FURTHER SITE DISTURBANCE OR CONSTRUCTION.
- NOTIFY DNREC INSPECTOR A MINIMUM OF (5) DAYS PRIOR TO THE START OF THE STORMWATER SYSTEM CONSTRUCTION. STORMWATER FACILITIES MUST BE REVIEWED THROUGH THEIR CONSTRUCTION.
- EROSION AND SEDIMENT CONTROL DEVICES SHOULD BE REMOVED ONLY AFTER WORK IN AN AREA HAS BEEN COMPLETED AND STABILIZED, WITH DNREC SEDIMENT AND STORMWATER PROGRAM SITE INSPECTORS APPROVAL.
- 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 SEDIMENT AND STORMWATER MANAGEMENT PLAN IMPLEMENTED, AND ACCEPTANCE OF THE FINAL OPERATION AND MAINTENANCE PLAN.

SEDIMENT & STORMWATER MANAGEMENT PLANS

CHRISTIANA HUNDRED CHRISTINA RIVER WATERSHED TAX PARCEL: 0704240179 WILMINGTON / NEW CASTLE COUNTY, DE

SHEET INDEX	
SHEET NO.:	TITLE:
C-500	SEDIMENT AND STORMWATER MANAGEMENT COVER SHEET
C-501	PRE-CONSTRUCTION SITE STORMWATER MANAGEMENT PLAN
C-502	CONSTRUCTION SITE STORMWATER MANAGEMENT PLAN
C-503 / C-504	EROSION AND SEDIMENT CONTROL DETAILS
C-PRE / C-POST	PRE / POST CONTRIBUTING DRAINAGE AREA PLAN (INC. WITHIN REPORT)

SITE DATA	
1. OWNER OF RECORD:	RED CLAY CREEK CONSOLIDATED SCHOOL DISTRICT (MARCIN MICHALSKI) 1502 PRICE AVENUE WILMINGTON, DE 19805 (302) 892-2884
2. ENGINEER / SURVEYOR:	BECKER MORGAN GROUP INC. 250 SOUTH MAIN STREET, SUITE 109 NEWARK, DE 19711 (302) 369-3700
3. DELEGATED AGENCY:	DNREC DIVISION OF WATERSHED STEWARDSHIP S & S 83 KINGS HWY (RICHARDSON & ROBBINS BUILDING) DOVER, DE 19901 (302) 739-9921
4. PROPERTY MAP NUMBER:	0704240179
5. ZONING CLASSIFICATION:	EXISTING: S (SUBURBAN) / SCHOOL PROPOSED: S (SUBURBAN) / SCHOOL
6. DEED SUMMARY:	H115-146
7. NUMBER OF LOTS:	EXISTING: 1 PROPOSED: 1
8. PRESENT USE:	HIGH SCHOOL
9. PROPOSED USE:	HIGH SCHOOL
10. TOTAL SITE AREA:	19.73 ACRES ±
11. EXISTING BUILDING:	FOOTPRINT: 68,175 S.F. ± ACCESSORY: 5,662 S.F. ±
12. PARKING CALCULATIONS:	NO CHANGES TO PARKING
13. BULK AREA STANDARDS:	S (SUBURBAN) / SCHOOL STREET: 40 FT. SIDE: 25 FT. REAR: 40 FT. PAVING STREET / OTHER YARD: 20 FT. / 10 FT. LOT AREA (MIN.): 40 FT. LOT WIDTH (MIN.): 100 FT. MIN. SITE AREA: 1 ACRE MIN. OS/SLR: 0.50
14. TRACT AREA CALCS:	EXISTING: 2.15 ACRES PROPOSED: 2.15 ACRES IMPERVIOUS: 5.33 ACRES OPEN SPACE: 12.25 ACRES TOTAL: 19.73 ACRES
15. RIGHT-OF-WAY:	JACKSON AVENUE 50' ROW LOCAL ROAD VICTORIA AVENUE 50' ROW LOCAL ROAD MARION PLACE 50' ROW LOCAL ROAD BOXWOOD ROAD 60' ROW MINOR ARTERIAL
16. BUILDING HEIGHT:	PERMITTED: 45 FT. (MAX.) PROPOSED: NONE PROPOSED
17. SOURCE OF WATER:	ARTESIAN WATER COMPANY, INC.
18. SOURCE OF SEWER:	PUBLIC - NEW CASTLE COUNTY FOUND P.K. NAIL
19. SURVEY BENCHMARK:	VERTICAL: NAVD88 HORIZONTAL: NAD83 (2011)
20. MONUMENTATION:	EXISTING: 0 FOUND PROPOSED: 3 SET
21. BENCHMARK LAT. / LONG.:	39.72889, -75.601389
22. TOTAL DISTURBED AREA:	4.21 ACRES ±
23. FIRE HYDRANTS:	EXISTING: 2 PROPOSED: 0
24. DNREC S&S PROGRAM No.:	TBD
25. DISCHARGE LOCATION:	AP-1 - BOXWOOD ROAD (1.76 AC) AP-2 - MARION PLACE CATCH BASINS (6.48 AC) AP-3 - PARKING LOT CATCH BASIN (1.30 AC)



PROJECT TITLE
APPLICATION NO.

CONRAD SCHOOLS OF SCIENCE: ATHLETIC FIELDS PHASE 2

201 JACKSON AVE.
WILMINGTON, DE 19804
CHRISTIANA HUNDRED

SHEET TITLE

SEDIMENT AND STORMWATER MANGEMENT COVER SHEET

CONSTRUCTION SEQUENCE FOR EROSION AND SEDIMENT CONTROL

- NOTIFY THE DNREC SEDIMENT AND STORMWATER PROGRAM IN WRITING AT LEAST FIVE (5) DAYS PRIOR TO THE START OF CONSTRUCTION. FAILURE TO DO SO CONSTITUTES A VIOLATION OF THE APPROVED SEDIMENT AND STORMWATER MANAGEMENT PLAN.
- OBTAIN ALL CITY, COUNTY, AND STATE PERMITS PRIOR TO THE START OF CONSTRUCTION.
- PRIOR TO ANY CLEARING, INSTALLATION OF SEDIMENT CONTROL MEASURES OR GRADING, A PRE-CONSTRUCTION MEETING MUST BE SCHEDULED AND CONDUCTED WITH THE AGENCY CONSTRUCTION SITE REVIEWER, THE LANDOWNER/DEVELOPER, CONTRACTOR, AND CERTIFIED CONSTRUCTION REVIEWER ARE REQUIRED TO BE IN ATTENDANCE AT THE PRE-CONSTRUCTION MEETING; THE DESIGNER IS RECOMMENDED TO ATTEND.
- CLEARING AND GRUBBING FOR THOSE AREAS NECESSARY FOR INSTALLATION OF PERIMETER CONTROLS
- INSTALL STABILIZED CONSTRUCTION ENTRANCE AND PERIMETER CONTROLS AT THE LOCATIONS SHOWN ON THE SITE PLAN. ALL PERIMETER CONTROLS ARE TO BE REVIEWED BY THE AGENCY CONSTRUCTION SITE REVIEWER AND APPROVED PRIOR TO PROCEEDING WITH FURTHER SITE DISTURBANCE OR CONSTRUCTION.
- THE CONTRACTOR SHALL AT ALL TIMES PROTECT AGAINST SEDIMENT OR DEBRIS LADEN RUNOFF OR WIND FROM LEAVING THE SITE. PERIMETER CONTROLS SHOULD BE CHECKED DAILY AND ADJUSTED AND/OR REPAIRED 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 AGENCY CONSTRUCTION SITE REVIEWER.
- NOTIFY THE PERSON RESPONSIBLE FOR STORMWATER SYSTEM CONSTRUCTION REVIEW AT LEAST THREE (3) DAYS PRIOR TO THE START OF THE STORMWATER SYSTEM CONSTRUCTION. STORMWATER FACILITIES MUST BE REVIEWED THROUGHOUT THEIR CONSTRUCTION.
- INSTALL UNDERGROUND UTILITIES LINES INCLUDING STORM DRAIN PROCEDURE
- ROUGH GRADE ALL NON PAVED AREAS ON THE PROJECT SITE. INSTALL SIDEWALKS, HANDICAP RAMPS AND OTHER SITE FEATURES, SUCH AS DUGOUTS.
- FINAL GRADE ALL NON PAVED AREAS.
- EROSION AND SEDIMENT CONTROL DEVICES SHOULD BE REMOVED ONLY AFTER WORK IN AN AREA HAS BEEN COMPLETED AND STABILIZED, WITH APPROVAL FROM THE AGENCY CONSTRUCTION SITE REVIEWER.
- PRIOR TO COMMENCING A NEW PHASE OF CONSTRUCTION, THE CONTRACTOR SHALL RECEIVE APPROVAL FROM THE AGENCY CONSTRUCTION SITE REVIEWER THAT THE PREVIOUS PHASE HAS BEEN SUFFICIENTLY STABILIZED.
- REMOVE ANY REMAINING PERIMETER CONTROLS AFTER STABILIZATION IS COMPLETED, INSPECTED AND APPROVED BY EROSION & SEDIMENT CONTROL INSPECTOR. INSPECT STORM DRAIN PIPES TO ENSURE THEY ARE CLEAN, CLEAR AND SILT FREE.
- 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.
- VEHICULAR TRAFFIC SHOULD BE PROHIBITED FROM THE AREA OF THE BOUNDARIES IN NOTE ABOVE (15).

ENGINEERS CERTIFICATION

I, J. MICHAEL RIEMANN, HEREBY CERTIFY THAT I AM A REGISTERED ENGINEER IN THE STATE OF DELAWARE, THAT THE INFORMATION SHOWN HEREON HAS BEEN PREPARED UNDER MY SUPERVISION AND TO MY BEST KNOWLEDGE AND BELIEF, THIS PLAN COMPLIES WITH THE APPLICABLE STATE AND LOCAL REGULATIONS AND ORDINANCES AND REPRESENTS GOOD ENGINEERING PRACTICES AS REQUIRED BY THE APPLICABLE LAWS OF THE STATE OF DELAWARE.

J. MICHAEL RIEMANN P.E. NO. 13772 DATE _____
BECKER MORGAN GROUP, INC.
250 SOUTH MAIN STREET SUITE 109
NEWARK, DELAWARE 19711
PHONE: 302-369-3700
FAX: 302-734-7965

OWNERS CERTIFICATION

I, THE UNDERSIGNED CERTIFY THAT ALL LAND CLEARING, CONSTRUCTION AND DEVELOPMENT SHALL BE DONE PURSUANT TO THE APPROVED PLAN AND THAT RESPONSIBLE PERSONNEL (I.E., BLUE CARD HOLDER) INVOLVED IN THE LAND DISTURBANCE WILL HAVE A CERTIFICATION OF TRAINING PRIOR TO INITIATION OF THE PROJECT, AT A DNREC SPONSORED OR APPROVED TRAINING COURSE FOR THE CONTROL OF EROSION AND SEDIMENT DURING CONSTRUCTION. IN ADDITION I GRANT DNREC SEDIMENT AND STORMWATER PROGRAM AND/OR THE RELEVANT DELEGATED AGENCY THE RIGHT TO CONDUCT ON-SITE REVIEWS, AND I UNDERSTAND MY RESPONSIBILITIES UNDER THE NPDES CONSTRUCTION GENERAL PERMIT, AS REFERENCED ON THIS COVERSHEET.

MARCIN MICHALSKI - MANGER OF FACILITIES (TAX PARCEL No.: 0704240179) DATE _____

CONRAD SCHOOLS OF SCIENCE
201 JACKSON AVE.
WILMINGTON, DE. 19804
PHONE: (302) 992-5545

SEDIMENT AND STORMWATER APPROVAL STAMP

EROSION & SEDIMENT CONTROL LEGEND	
CONCRETE WASHOUT	CWS
CONCRETE MIXING OPERATION	CMO
STABILIZED CONSTRUCTION ENTRANCE	SCE
LIMIT OF DISTURBANCE	L.O.D.
SILT FENCE	SF
REINFORCE SILT FENCE	RSF
SENSITIVE AREA PROTECTION	SAP

STABILIZATION AND SEEDING NOTES :

- PERMANENT SEEDING :
 - SHALL BE CONDUCTED YEAR AROUND.
 - SEED BED PREPARATION : SHALL BE IN ACCORDANCE WITH DE-ESC-3.4.3, SHEET 4 OF 4.
 - SOIL AMENDMENTS : FERTILIZER AND LIME APPLICATION SHALL BE IN ACCORDANCE WITH DE-ESC-3.4.3, SHEET 4 OF 4. SEE SPECIFICATIONS FOR PLAYING FIELD SOIL AMENDMENT INFO.
 - SEEDING : APPLY MIX NO. 7 IN ACCORDANCE WITH DE-ESC-3.4.3, SHEET 2 OF 4.
APPLY SEED UNIFORMLY WITH A BROADCAST SEEDER, DRILL, CULTIPACKER SEEDER OR HYDROSEEDER. ALL SEED WILL BE APPLIED AT THE RECOMMENDED RATE AND PLANTING DEPTH. SEE SPECIFICATIONS FOR PLAYING FIELD SEEDING INFO.
 - MULCH : IMMEDIATELY AFTER SEEDING, UNIFORMLY MULCH ENTIRE AREA WITH STRAW AT A RATE OF 2 TONS PER ACRE MINIMUM. ALL MULCHING SHALL BE DONE IN ACCORDANCE WITH DETAIL DE-ESC-3.4.5.
 - TOPSOIL : ALL AREAS TO BE PERMANENTLY SEEDED SHALL HAVE A MINIMUM OF 4" OF TOPSOIL.
- TEMPORARY STABILIZATION :
 - PROVIDE SEED BED SAME AS 1-B ABOVE.
 - APPLY MIX NO. 5 (ANNUAL RYEGRASS) IN ACCORDANCE WITH DETAIL DE-ESC-3.4.3, SHEET 1 OF 4.
 - MULCH SAME AS 1-E ABOVE.
- IF TEMPORARY STABILIZATION IS REQUIRED, PERMANENT SEEDING SHALL BE PERFORMED AS SOON AS POSSIBLE.
- ALL FILL SLOPE AREAS SHOWN ON PLAN ARE TO BE STABILIZED AS PER STATEMENT 1 OR 2 ABOVE IMMEDIATELY AFTER COMPLETION OF GRADING OPERATIONS FOR THESE SLOPES.
- EROSION CONTROL MATTING IS REQUIRED ON ALL SLOPES OF 3:1 OR GREATER AND IN AREAS OF CONCENTRATED FLOW. USE TYPE SSM-11 NORTH AMERICAN GREEN S150BN OR APPROVED EQUAL.



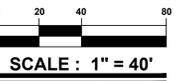
PROJECT TITLE
APPLICATION NO.

CONRAD SCHOOLS OF SCIENCE: ATHLETIC FIELDS PHASE 2

201 JACKSON AVE.
WILMINGTON, DE 19804
CHRISTIANA HUNDRED

SHEET TITLE

PRE - CONSTRUCTION SITE STORMWATER MANAGEMENT PLAN



ISSUE BLOCK

MARK	DATE	DESCRIPTION
LAYER STATE: C-501		

PROJECT NO.: 2013222.01

DATE: 6/30/17

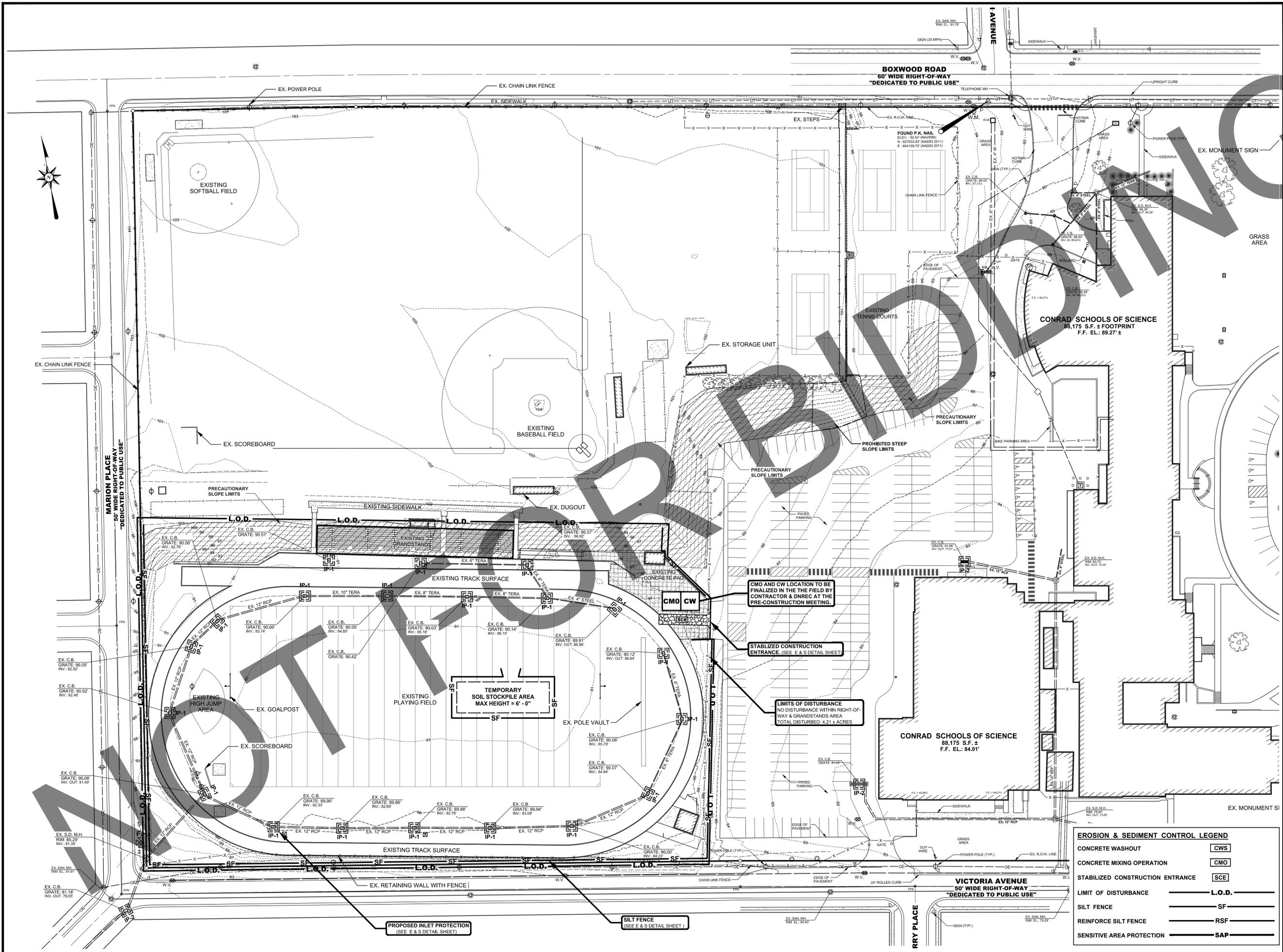
SCALE: 1" = 40'

DRAWN BY: A.P.C. PROJ. MGR.: J.S.F.

SHEET

C-501

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EROSION & SEDIMENT CONTROL LEGEND

CONCRETE WASHOUT		CWS
CONCRETE MIXING OPERATION		CMO
STABILIZED CONSTRUCTION ENTRANCE		SCE
LIMIT OF DISTURBANCE		L.O.D.
SILT FENCE		SF
REINFORCE SILT FENCE		RSF
SENSITIVE AREA PROTECTION		SAP



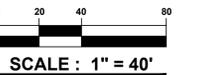
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CONRAD SCHOOLS OF SCIENCE: ATHLETIC FIELDS PHASE 2

201 JACKSON AVE.
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CHRISTIANA HUNDRED

SHEET TITLE

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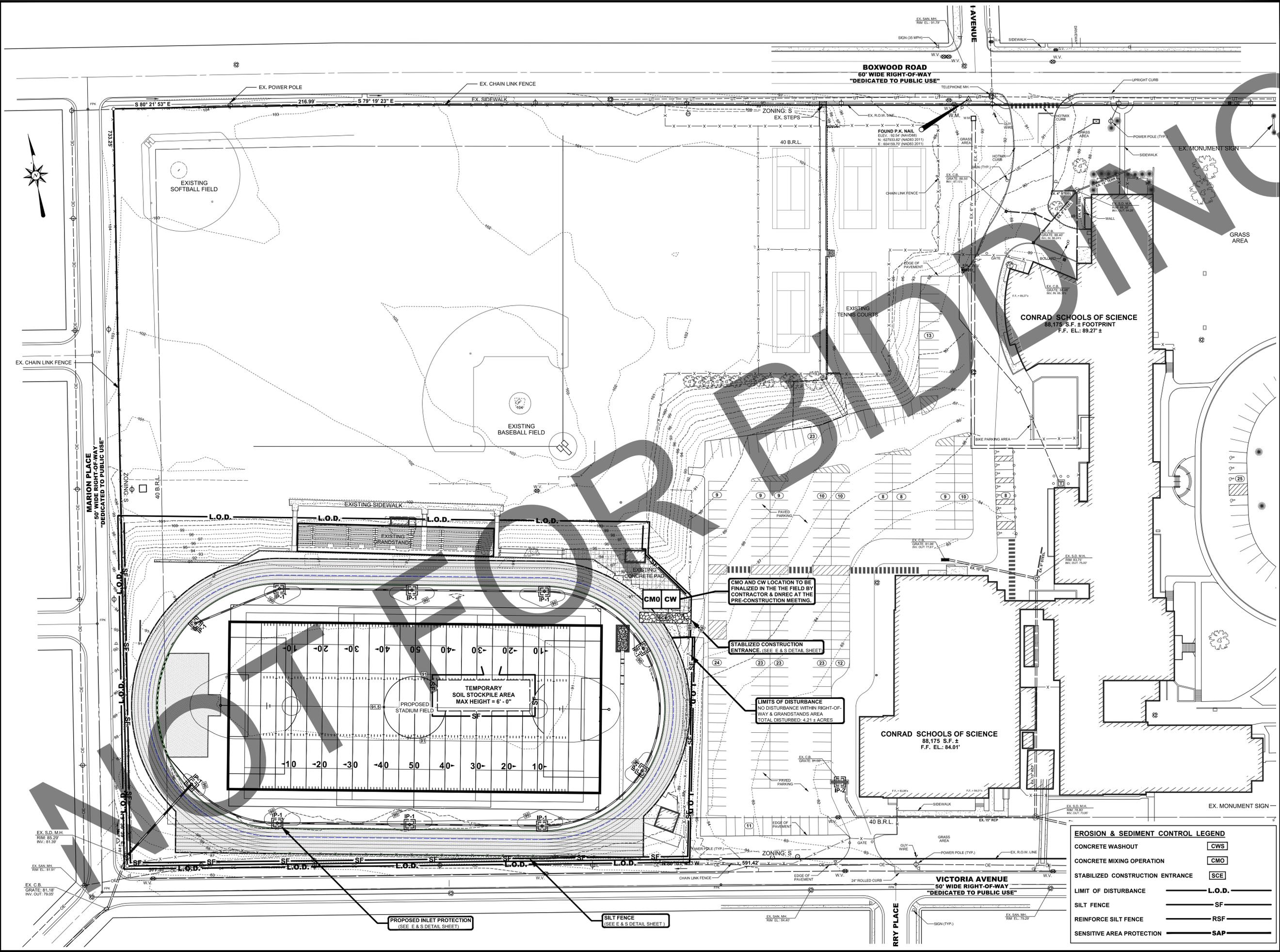
ISSUE BLOCK

MARK	DATE	DESCRIPTION

PROJECT NO.: 2013222.01
DATE: 6/30/17
SCALE: 1" = 40'
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SHEET

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EROSION & SEDIMENT CONTROL LEGEND

CONCRETE WASHOUT	CWS
CONCRETE MIXING OPERATION	CMO
STABILIZED CONSTRUCTION ENTRANCE	SCE
LIMIT OF DISTURBANCE	L.O.D.
SILT FENCE	SF
REINFORCE SILT FENCE	RSF
SENSITIVE AREA PROTECTION	SAP

Standard Detail & Specifications Silt Fence

Section

Min. 40" stake length
Reinforcing strip over geosynthetic fabric (Typ. each stake)
Min. 24" stake length above ground
Flow
Embed fabric min. 6" vertically into ground
Min. 10" stake length driven into ground

Plan

Flow
Ends placed upright to contain runoff
6' Max.
2" x 2" wooden posts (Typ.)
DIMS
Max. controlled slope

Source: Adapted from MD Sds. & Specs. for ESC
Symbol: **SF**
Detail No. **DE-ESC-3.1.2.1**
Sheet 1 of 2
Date: 6/05

Standard Detail & Specifications Silt Fence

Construction Detail

Staple
Staple
Method for joining continuous sections

Construction Notes:

- Geosynthetic fabric to be fastened securely to fence posts with wire ties or staples.
- When two sections of filter cloth adjoin each other they shall be overlapped by six inches and folded.
- Maintenance shall be performed as needed and material removed when "bulges" develop in the silt fence.

Materials:

- Stakes: Steel I-beam T or UJ or 2" x 2" hardwood
- Geosynthetic Fabric: Type GD-1
- Reinforcing strip: Wooden lath, plastic strip or other approved equivalent
- Prefabricated Linth: Geotab, Envirocrete, or approved equivalent

Source: Adapted from MD Sds. & Specs. for ESC
Symbol: **SF**
Detail No. **DE-ESC-3.1.2.1**
Sheet 2 of 2
Date: 6/05

Standard Detail & Specifications Soil Stockpile

Section A-A

DATA TO BE PROVIDED
Max. Height, h
Stockpile entrance to be located on the up-slope side, if needed
3' separation (min.)
Remender Control (i.e., Silt Fence)
Stabilize per temporary vegetation specifications
Max. height 20' (17' on residential lot)
3:1 max.

Plan View

Flow
Install perimeter control per specification

Source: Adapted from Colorado Urban Storm Drainage Criteria Manual, Vol 3
Symbol: **SP**
Detail No. **DE-ESC-3.7.3**
Sheet 1 of 2
Date: 03/13

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 erodes 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
Date: 03/13



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www.beckermorgan.com

Standard Detail & Specifications Construction Site Waste Mgt & Spill Control

Section

Double layer plastic sheeting, or approved equal
Min. 6" compact log or 2" x 6" floor beam
Stake as required per manufacturer guidelines

Plan

Double layer plastic sheeting
Fuel Tank
Spill containment area

Source: Delaware ESC Handbook
Symbol:
Detail No. **DE-ESC-3.6.1**
Sheet 1 of 5
Date: 05/15

Standard Detail & Specifications Construction Site Waste Mgt & Spill Control

Pollution Prevention - Spill Prevention

- Fueling should only take place in signed designated areas, away from downstream drainage facilities and watercourses.
- Fueling must be with nozzles equipped with automatic shut-off to control drips. Do not top off.
- Protect the areas where equipment or vehicles are being repaired, maintained, fueled or parked from storm water run-off and runoff.
- Use barriers such as berms to prevent storm water run-on and runoff, and to contain spills.
- Place a "Fueling Area" sign next to each fueling area.
- Store hazardous materials such as fuel, solvents, oil and chemicals in secondary containment.
- Inspect vehicles and equipment for leaks on each day of use. Repair fluid and oil leaks immediately.
- Absorbent spill clean-up materials and spill kits must be available in fueling areas and on fuel trucks.
- If fueling is to take place at night, make sure the fueling area is sufficiently illuminated.
- Properly dispose of used oil, fluids, lubricants and spill clean-up materials.

CLEAN UP SPILLS

- If it is safe to do so, immediately contain and clean up any chemical and/or hazardous material spills.
- Properly dispose of used oil, fluids, lubricants and spill clean-up materials.
- Do not bury spills or wash them down with water.

LEAKS AND DROPS

- Use drip pans or absorbent pads at all times. Place under and around leaky equipment.
- Do not allow oil, grease, fuel or chemicals to drip onto the ground.
- Have spill kits and clean up material on-site.
- Repair leaky equipment promptly or remove problem vehicles and equipment from the site. Clean up contaminated soil immediately.
- Store contaminated waste in sealed containers constructed of suitable material. Label these containers properly.
- Clean up all spills and leaks. Promptly dispose of waste and spent clean up materials.

Source: Delaware ESC Handbook
Symbol:
Detail No. **DE-ESC-3.6.1**
Sheet 1 of 5
Date: 05/15

Standard Detail & Specifications Construction Site Waste Mgt & Spill Control

Notes:

The Construction Site Pollution Prevention Plan should include the following elements:

- Material Inventory**
Document the storage and use of the following materials:
 - Concrete
 - Detergents
 - Paints (enamel and latex)
 - Cleaning solvents
 - Pesticides
 - Wood scraps
 - Fertilizers
 - Petroleum based products
- Good housekeeping practices**
 - Store only enough product required to do the job.
 - All materials shall be stored in a neat, orderly manner in their original labeled containers and covered.
 - Substances shall not be mixed.
 - When possible, all of a product shall be used up prior to disposal of the container.
 - Manufacturers' instructions for disposal shall be strictly adhered to.
 - The site foreman shall designate someone to inspect all BMPs daily.
- Waste management practices**
 - All waste materials shall be collected and stored in sealed dumpsters in a location that does not drain to a waterbody.
 - Waste materials shall be salvaged and/or recycled whenever possible.
 - The dumpsters shall be emptied a minimum of twice per week, or more if necessary. The licensed trash hauler is responsible for cleaning out dumpsters.

Source: Adapted from USEPA Pub. 840-B-92-002
Symbol:
Detail No. **DE-ESC-3.6.1**
Sheet 4 of 5
Date: 05/15

Standard Detail & Specifications Construction Site Waste Mgt & Spill Control

Notes (cont.)

- Trash shall be disposed of in accordance with all applicable Delaware laws.
- Trash cans shall be placed at lunch spots and littering is strictly prohibited. Recycle bins shall be placed near the construction trailer.
- If fertilizer bags can not be stored in a weather-proof location, they shall be kept on a pallet and covered with plastic sheeting which is overlapped and anchored.
- Equipment maintenance practices**
 - If possible, equipment should be taken to off-site commercial facilities for washing and maintenance.
 - If performed on-site, vehicles shall be washed with high-pressure water spray without detergents in an area contained by an impervious berm.
 - Drip pans shall be used for all equipment maintenance.
 - Equipment shall be inspected for leaks on a daily basis.
 - Washout from concrete trucks shall be disposed of in a temporary pit for hardening and proper disposal.
 - Fuel nozzles shall be equipped with automatic shut-off valves.
 - All used products such as oil, antifreeze, solvents and tires shall be disposed of in accordance with manufacturers' recommendations and local, state and federal laws and regulations.
- Spill prevention practices**
 - Potential spill areas shall be identified and contained in covered areas with no connection to the storm drain system.
 - Warning signs shall be posted in hazardous material storage areas.
 - Preventive maintenance shall be performed on all tanks, valves, pumps, pipes and other equipment as necessary.
 - Low or non-toxic substances shall be prioritized for use.

Source: Adapted from USEPA Pub. 840-B-92-002
Symbol:
Detail No. **DE-ESC-3.6.1**
Sheet 4 of 5
Date: 05/15

Standard Detail & Specifications Construction Site Waste Mgt & Spill Control

Notes (cont.)

- Contact information for reporting spills through the DNREC 24-Hour Toll Free Number shall be prominently posted.
- Education**
 - Best management practices for construction site pollution control shall be a part of regular progress meetings.
 - Information regarding waste management, equipment maintenance and spill prevention shall be prominently posted in the construction trailer.

CONTACT INFORMATION

DNREC 24-Hour Toll Free Number: **800-662-8802**
DNREC Solid & Hazardous Waste Branch: **302-739-9403**

Source: Adapted from USEPA Pub. 840-B-92-002
Symbol:
Detail No. **DE-ESC-3.6.1**
Sheet 5 of 5
Date: 05/15

Standard Detail & Specifications Dust Control

Temporary Methods:

- Mulches - See DE-ESC-3.4.5, Standard Detail and Specifications for Mulching.
- Vegetative cover - See DE-ESC-3.4.3, Std. Detail and Specifications for Vegetative Stabilization.
- Adhesives - Use on mineral soils not effective on muck soil. Keep traffic off these areas. The following table may be used for general guidance.

Type of Emulsion	Water Dilution	Type of Nozzle	Apply Gal./Ac.
Latex emulsion	12.5:1	Fine spray	235
Resin-in-water emulsion	4:1	Fine spray	300
Acrylic emulsion (non-traffic)	7:1	Coarse spray	450
Acrylic emulsion (traffic)	3.5:1	Coarse spray	350

Permanent Methods:

- Vegetative cover - See DE-ESC-3.4.3, Std. Detail and Specifications for Vegetative Stabilization.
- Stone - Apply layer of crushed stone or coarse gravel to protect soil surface.

Source: Adapted from VA ESC Handbook
Symbol:
Detail No. **DE-ESC-3.4.8**
Sheet 1 of 1
Date: 12/03



PROJECT TITLE
APPLICATION NO.

CONRAD SCHOOLS OF SCIENCE: ATHLETIC FIELDS PHASE 2

201 JACKSON AVE.
WILMINGTON, DE 19804
NEW CASTLE COUNTY

SHEET TITLE

EROSION AND SEDIMENT CONTROL DETAILS

Standard Detail & Specifications Topsoiling

Construction Notes:

- Site Preparation** (Where Topsoil is to be added)

Note: When topsoiling, maintain needed erosion and sediment control practices such as diversions, grade stabilization structures, berms, dikes, waterways and sediment basins.

 - Grading - Grades on the areas to be topsoiled which have been previously established shall be maintained.
 - Liming - Where the topsoil is either light or composed of heavy clays, ground limestone shall be spread at the rate of 6 lbs. tons/acre (200-400 pounds per 1,000 square feet). Lime shall be distributed uniformly over disturbed areas of soil exposed to the soil in conjunction with tillage operations as described in the following procedures.
 - Tilling - After liming to be topsoiled have been brought to grade, and immediately prior to spreading and spreading the topsoil, the subgrade shall be loosened by tilling or by using a heavy-duty roller to break up the soil to a depth of 4 to 6 inches. This shall be done by passing a roller up and down over the entire surface area of the slope to cross horizontal erosion check dikes to prevent topsoil from sliding down the slope.
- Topsoil Material and Application**

Note: Topsoil salvaged from the existing site may often be reused but it should meet the same standards as that from the existing site. The depth of tilling to be salvaged shall be no more than 10 inches as described in a representative profile for that particular soil type as described in the soil survey published by USDA-SCS in cooperation with Delaware Agricultural Experiment Station.

Source: USDA - NRCS
Symbol:
Detail No. **DE-ESC-3.4.1**
Sheet 1 of 2
Date: 05/15

Standard Detail & Specifications Topsoiling

Construction Notes (cont.)

- Materials** - Topsoil shall be a loam, sandy loam, clay loam, silt loam, sandy clay loam, loamy sand or other soil as approved by an agronomist or soil scientist. It shall not have a texture of coarsest textured subsoil and contain no more than 5 percent by volume of boulders, stones, slag, coarse fragments, gravel, sticks, roots, trash or other extraneous materials larger than 1-1/2 inches in diameter. Topsoil must be free of plants or plant parts of weeds, grasses, quackgrass, Johnson grass, nutgrass, poison ivy, thistles, or others as specified. All topsoil shall be tested by a reputable laboratory for organic matter content, pH and soluble salts. A pH of 6.0 to 7.5 and an organic content of not less than 1.5 percent by weight is required. If pH values is less than 6.0 lime shall be applied and incorporated with the topsoil to adjust the pH to 6.5 or higher. Topsoil containing soluble salts greater than 500 parts per million shall not be used.
- Soil** - No soil or seed shall be placed on soil which has been treated with soil sterilants or chemicals used for weed control until sufficient time has elapsed to permit dissipation of toxic materials.
- Grading** - The topsoil shall be uniformly distributed and compacted to a minimum of four (4) inches. Spreading shall be performed in such a manner that seeding or seeding can proceed with a minimum of additional soil preparation and tillage. Any irregularities in the surface resulting from topsoiling or other operations shall be corrected in order to prevent the formation of depressions or water pockets. Topsoil shall not be placed where in stream or muddy condition, when the subgrade is excessively wet, or in a condition that may otherwise be detrimental to proper grading and seedbed preparation.

Note: Topsoil substitutes or amendments as approved by a qualified agronomist or soil scientist, may be used in lieu of natural topsoil. Compost material used to improve the percentage of organic matter shall be provided by a certified supplier.

Compost amendments that are intended to meet specific post-construction stormwater management goals shall further meet the requirements of **Appendix 3.06.2 Post Construction Stormwater Management BMP Standards and Specifications, Section 14.0 Soil Amendments.**

Source: USDA - NRCS
Symbol:
Detail No. **DE-ESC-3.4.1**
Sheet 2 of 2
Date: 05/15

Standard Detail & Specifications Vegetative Stabilization

TEMPORARY SEEDING BY RATES, DEPTHS AND DATES

No. #	Species*	Seeding Rate	Optimum Seeding Dates ¹	Planting Depth ²
1	Certified Seed	125	4 O A	1/2" - 2" (2" max)
2	Soil	125	4 O A	1/2" - 2" (2" max)
3	Soil	125	4 O A	1/2" - 2" (2" max)
4	Soil	125	4 O A	1/2" - 2" (2" max)
5	Soil	125	4 O A	1/2" - 2" (2" max)
6	Soil	125	4 O A	1/2" - 2" (2" max)
7	Soil	125	4 O A	1/2" - 2" (2" max)
8	Soil	125	4 O A	1/2" - 2" (2" max)

Source: Delaware ESC Handbook
Symbol:
Detail No. **DE-ESC-3.4.3**
Sheet 1 of 4
Date: 12/03

Standard Detail & Specifications Vegetative Stabilization

PERMANENT SEEDING AND SEEDING DATES

No. #	Certified Seed	Seeding Rate ¹	Optimum Seeding Dates ²	Planting Depth ³	Remarks
1	Grass (Tall Fescue)	100	4 O A	1/2" - 2" (2" max)	Good seedbed conditions. 1/2" - 2" (2" max) depth. 1/2" - 2" (2" max) depth. 1/2" - 2" (2" max) depth.
2	Grass (Kentucky Bluegrass)	100	4 O A	1/2" - 2" (2" max)	Good seedbed conditions. 1/2" - 2" (2" max) depth. 1/2" - 2" (2" max) depth. 1/2" - 2" (2" max) depth.
3	Grass (Perennial Ryegrass)	100	4 O A	1/2" - 2" (2" max)	Good seedbed conditions. 1/2" - 2" (2" max) depth. 1/2" - 2" (2" max) depth. 1/2" - 2" (2" max) depth.
4	Grass (Annual Ryegrass)	100	4 O A	1/2" - 2" (2" max)	Good seedbed conditions. 1/2" - 2" (2" max) depth. 1/2" - 2" (2" max) depth. 1/2" - 2" (2" max) depth.
5	Grass (Bermudagrass)	100	4 O A	1/2" - 2" (2" max)	Good seedbed conditions. 1/2" - 2" (2" max) depth. 1/2" - 2" (2" max) depth. 1/2" - 2" (2" max) depth.
6	Grass (St. Augustine)	100	4 O A	1/2" - 2" (2" max)	Good seedbed conditions. 1/2" - 2" (2" max) depth. 1/2" - 2" (2" max) depth. 1/2" - 2" (2" max) depth.
7	Grass (Zoysia)	100	4 O A	1/2" - 2" (2" max)	Good seedbed conditions. 1/2" - 2" (2" max) depth. 1/2" - 2" (2" max) depth. 1/2" - 2" (2" max) depth.
8	Grass (Miscanthus)	100	4 O A	1/2" - 2" (2" max)	Good seedbed conditions. 1/2" - 2" (2" max) depth. 1/2" - 2" (2" max) depth. 1/2" - 2" (2" max) depth.
9	Grass (Cynodon)	100	4 O A	1/2" - 2" (2" max)	Good seedbed conditions. 1/2" - 2" (2" max) depth. 1/2" - 2" (2" max) depth. 1/2" - 2" (2" max) depth.
10	Grass (Panicum)	100	4 O A	1/2" - 2" (2" max)	Good seedbed conditions. 1/2" - 2" (2" max) depth. 1/2" - 2" (2" max) depth. 1/2" - 2" (2" max) depth.
11	Grass (Sporobolus)	100	4 O A	1/2" - 2" (2" max)	Good seedbed conditions. 1/2" - 2" (2" max) depth. 1/2" - 2" (2" max) depth. 1/2" - 2" (2" max) depth.
12	Grass (Echinochloa)	100	4 O A	1/2" - 2" (2" max)	Good seedbed conditions. 1/2" - 2" (2" max) depth. 1/2" - 2" (2" max) depth. 1/2" - 2" (2" max) depth.
13	Grass (Digitaria)	100	4 O A	1/2" - 2" (2" max)	Good seedbed conditions. 1/2" - 2" (2" max) depth. 1/2" - 2" (2" max) depth. 1/2" - 2" (2" max) depth.
14	Grass (Cenchrus)	100	4 O A	1/2" - 2" (2" max)	Good seedbed conditions. 1/2" - 2" (2" max) depth. 1/2" - 2" (2" max) depth. 1/2" - 2" (2" max) depth.
15	Grass (Pennisetum)	100	4 O A	1/2" - 2" (2" max)	Good seedbed conditions. 1/2" - 2" (2" max) depth. 1/2" - 2" (2" max) depth. 1/2" - 2" (2" max) depth.
16	Grass (Syntherisma)	100	4 O A	1/2" - 2" (2" max)	Good seedbed conditions. 1/2" - 2" (2" max) depth. 1/2" - 2" (2" max) depth. 1/2" - 2" (2" max) depth.
17	Grass (Hemipogon)	100	4 O A	1/2" - 2" (2" max)	Good seedbed conditions. 1/2" - 2" (2" max) depth. 1/2" - 2" (2" max) depth. 1/2" - 2" (2" max) depth.
18	Grass (Lycopodium)	100	4 O A	1/2" - 2" (2" max)	Good seedbed conditions. 1/2" - 2" (2" max) depth. 1/2" - 2" (2" max) depth. 1/2" - 2" (2" max) depth.
19	Grass (Lycopodium)	100	4 O A	1/2" - 2" (2" max)	Good seedbed conditions. 1/2" - 2" (2" max) depth. 1/2" - 2" (2" max) depth. 1/2" - 2" (2" max) depth.
20	Grass (Lycopodium)	100	4 O A	1/2" - 2" (2" max)	Good seedbed conditions. 1/2" - 2" (2" max) depth. 1/2" - 2" (2" max) depth. 1/2" - 2" (2" max) depth.
21	Grass (Lycopodium)	100	4 O A	1/2" - 2" (2" max)	Good seedbed conditions. 1/2" - 2" (2" max) depth. 1/2" - 2" (2" max) depth. 1/2" - 2" (2" max) depth.
22	Grass (Lycopodium)	100	4 O A	1/2" - 2" (2" max)	Good seedbed conditions. 1/2" - 2" (2" max) depth. 1/2" - 2" (2" max) depth. 1/2" - 2" (2" max) depth.
23	Grass (Lycopodium)	100	4 O A	1/2" - 2" (2" max)	Good seedbed conditions. 1/2" - 2" (2" max) depth. 1/2" - 2" (2" max) depth. 1/2" - 2" (2" max) depth.
24	Grass (Lycopodium)	100	4 O A	1/2" - 2" (2" max)	Good seedbed conditions. 1/2" - 2" (2" max) depth. 1/2" - 2" (2" max) depth. 1/2" - 2" (2" max) depth.
25	Grass (Lycopodium)	100	4 O A	1/2" - 2" (2" max)	Good seedbed conditions. 1/2" - 2" (2" max) depth. 1/2" - 2" (2" max) depth. 1/2" - 2" (2" max) depth.
26	Grass (Lycopodium)	100	4 O A	1/2" - 2" (2" max)	Good seedbed conditions. 1/2" - 2" (2" max) depth. 1/2" - 2" (2" max) depth. 1/2" - 2" (2" max) depth.
27	Grass (Lycopodium)	100	4 O A	1/2" - 2" (2" max)	Good seedbed conditions. 1/2" - 2" (2" max) depth. 1/2" - 2" (2" max) depth. 1/2" - 2" (2" max) depth.
28	Grass (Lycopodium)	100	4 O A	1/2" - 2" (2" max)	Good seedbed conditions. 1/2" - 2" (2" max) depth. 1/2" - 2" (2" max) depth. 1/2" - 2" (2" max) depth.
29	Grass (Lycopodium)	100	4 O A	1/2" - 2" (2" max)	Good seedbed conditions. 1/2" - 2" (2" max) depth. 1/2" - 2" (2" max) depth. 1/2" - 2" (2" max) depth.
30	Grass (Lycopodium)	100	4 O A	1/2" - 2" (2" max)	Good seedbed conditions. 1/2" - 2" (2" max) depth. 1/2" - 2" (2" max) depth. 1/2" - 2" (2" max) depth.
31	Grass (Lycopodium)	100	4 O A	1/2" - 2" (2" max)	Good seedbed conditions. 1/2" - 2" (2" max) depth. 1/2" - 2" (2" max) depth. 1/2" - 2" (2" max) depth.
32	Grass (Lycopodium)	100	4 O A	1/2" - 2" (2" max)	Good seedbed conditions. 1/2" - 2" (2" max) depth. 1/2" - 2" (2" max) depth. 1/2" - 2" (2" max) depth.
33	Grass (Lycopodium)	100	4 O A	1/2" - 2" (2" max)	Good seedbed conditions. 1/2" - 2" (2" max) depth. 1/2" - 2" (2" max) depth. 1/2" - 2" (2" max) depth.
34	Grass (Lycopodium)	100	4 O A	1/2" - 2" (2" max)	Good seedbed conditions. 1/2" - 2" (2" max) depth. 1/2" - 2" (2" max) depth. 1/2" - 2" (2" max) depth.
35	Grass (Lycopodium)	100	4 O A	1/2" - 2" (2" max)	Good seedbed conditions. 1/2" - 2" (2" max) depth. 1/2" - 2" (2" max) depth. 1/2" - 2" (2" max) depth.
36	Grass (Lycopodium)	100	4 O A	1/2" - 2" (2" max)	Good seedbed conditions. 1/2" - 2" (2" max) depth. 1/2" - 2" (2" max) depth. 1/2" - 2" (2" max) depth.
37	Grass (Lycopodium)	100	4 O A	1/2" - 2" (2" max)	Good seedbed conditions. 1/2" - 2" (2" max) depth. 1/2" - 2" (2" max) depth. 1/2" - 2" (2" max) depth.
38	Grass (Lycopodium)	100	4 O A	1/2" - 2" (2" max)	Good seedbed conditions. 1/2" - 2" (2" max) depth. 1/2" - 2" (2" max) depth. 1/2" - 2" (2" max) depth.
39	Grass (Lycopodium)	100	4 O A	1/2" - 2" (2" max)	Good seedbed conditions. 1/2" - 2" (2" max) depth. 1/2" - 2" (2" max) depth. 1/2" - 2" (2" max) depth.
40	Grass (Lycopodium)	100	4 O A	1/2" - 2" (2" max)	Good seedbed conditions. 1/2" - 2" (2" max) depth. 1/2" - 2" (2" max) depth. 1/2" - 2" (2" max) depth.
41	Grass (Lycopodium)	100	4 O A	1/2" - 2" (2" max)	Good seedbed conditions. 1/2" - 2" (2" max) depth. 1/2" - 2" (2" max) depth. 1/2" - 2" (2" max) depth.
42	Grass (Lycopodium)	100	4 O A	1/2" - 2" (2" max)	Good seedbed conditions. 1/2" - 2" (2" max) depth. 1/2" - 2" (2" max) depth. 1/2" - 2" (2" max) depth.
43	Grass (Lycopodium)	100	4 O A	1/2" - 2" (2" max)	Good seedbed conditions. 1/2" - 2" (2" max) depth. 1/2" - 2" (2" max) depth. 1/2" - 2" (2" max) depth.
44	Grass (Lycopodium)	100	4 O A	1/2" - 2" (2" max)	Good seedbed conditions. 1/2" - 2" (2" max) depth. 1/2" - 2" (2" max) depth. 1/2" - 2" (2" max) depth.
45	Grass (Lycopodium)	100	4 O A	1/2" - 2" (2" max)	Good seedbed conditions. 1/2" - 2" (2" max) depth. 1/2" - 2" (2" max) depth. 1/2" - 2" (2" max) depth.
46	Grass (Lycopodium)	100	4 O A	1/2" - 2" (2" max)	Good seedbed conditions. 1/2" - 2" (2" max) depth. 1/2" - 2" (2" max) depth. 1/2" - 2" (2" max) depth.
47	Grass (Lycopodium)	100</			



PROJECT TITLE
APPLICATION NO.

CONRAD SCHOOLS OF SCIENCE: ATHLETIC FIELDS PHASE 2

201 JACKSON AVE.
WILMINGTON, DE 19804
NEW CASTLE COUNTY

SHEET TITLE

CONSTRUCTION DETAILS

ISSUE BLOCK

MARK DATE DESCRIPTION

LAYER STATE C-901

PROJECT NO.: 2013222.01

DATE: 6/30/17

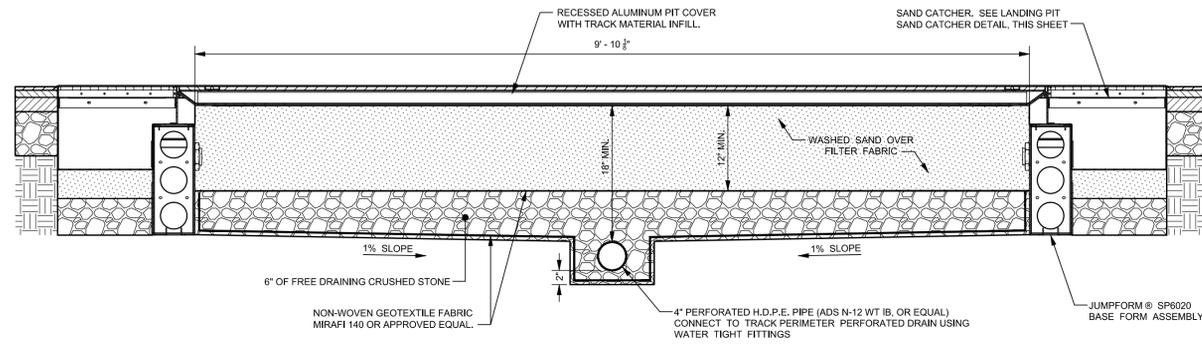
SCALE: AS SHOWN

DRAWN BY: A.P.C. PROJ. MGR.: J.S.F.

SHEET

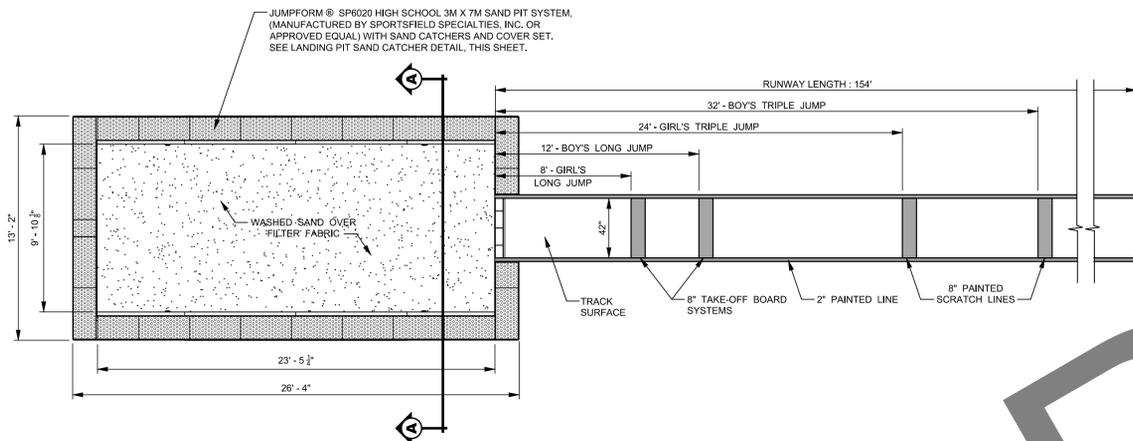
C-901

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LONG JUMP LANDING PIT - CROSS SECTION "A-A"

SCALE: 1" = 1'

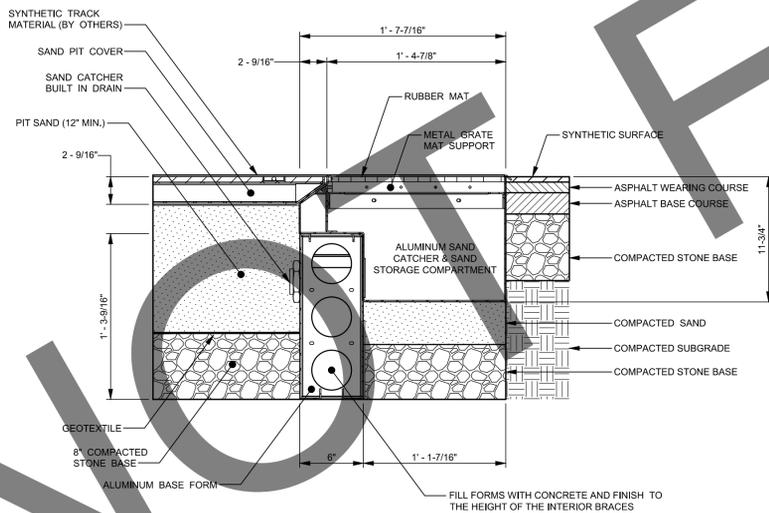


NOTES:

1. INCLINATION SHALL BE LIMITED TO 2% LATERALLY AND 0.1% IN THE JUMPING DIRECTION.
2. THE TAKE-OFF BOARD SYSTEM SHALL BE MANUFACTURED FROM WOOD OR SYNTHETIC MATERIAL WITH AN ALUMINUM SPACER AND STAINLESS STEEL BASE TRAY TO PROVIDE A FIRM BASE. ALUMINUM SPACER SHALL BE COATED WITH TRACK SURFACE ON ONE SIDE. SPORTSFIELD SPECIALTIES #FTL088S, OR APPROVED EQUAL.
3. THE LANDING PIT SHALL BE FILLED WITH SAND AND SHALL HAVE THE SAME ELEVATION AS THE TAKE-OFF BOARD.

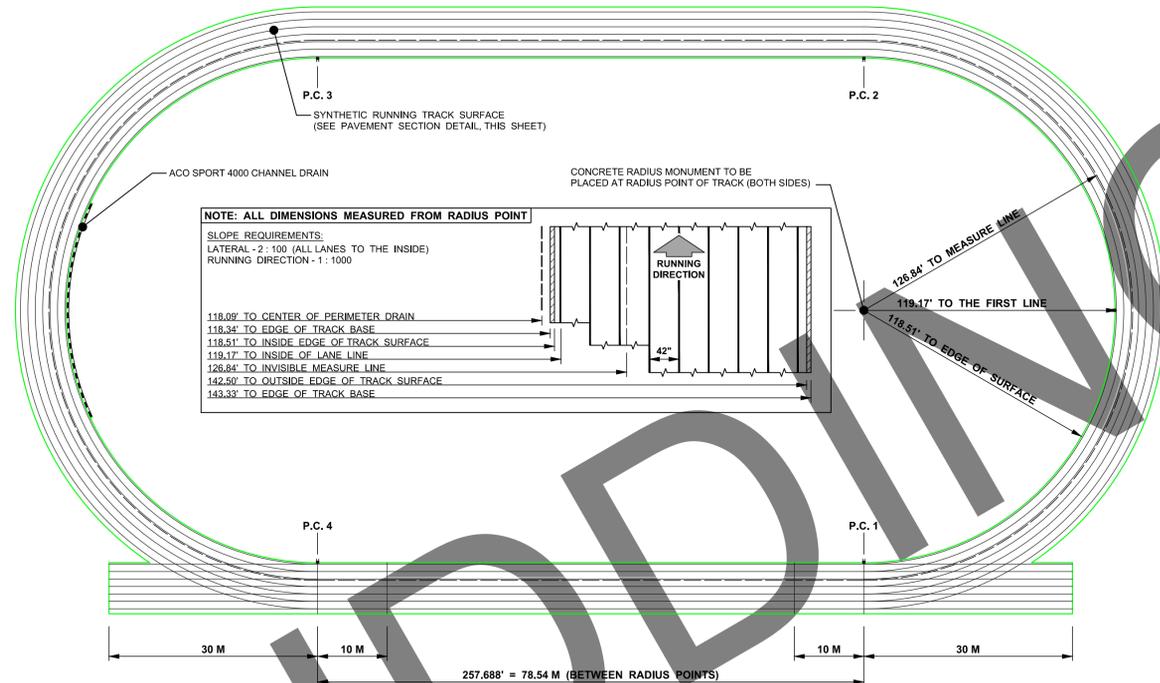
LONG JUMP / TRIPLE JUMP RUNWAY & LANDING PIT DETAIL

SCALE: 1" = 5'



LANDING PIT SAND CATCHER DETAIL

NO SCALE

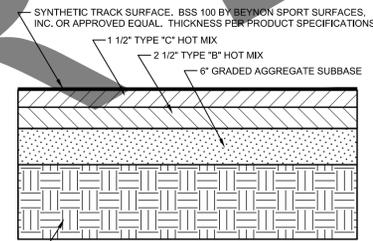


NOTES:

1. TRACK SHALL BE 6 LANE, EQUAL QUADRANT STYLE, CONSTRUCTED OF ASPHALT PAVING ON BASE MATERIAL, WITH SYNTHETIC RUNNING SURFACE. SEE "TRACK PAVEMENT SECTION" DETAIL, THIS SHEET.
2. "MEASURE LINE" AS REFERRED TO IN THIS DETAIL IS AN INVISIBLE LINE 7.67' OUTSIDE OF THE INNER LANE LINE OF THE INSIDE LANE. SEE "TRACK DIMENSION DETAIL", THIS SHEET.
3. TRACK SHALL BE CONSTRUCTED WITH PERIMETER TRACK DRAIN AROUND INSIDE PERIMETER AT THE HIGH JUMP AREA. SEE "TRACK TO HIGH JUMP SURFACE DETAIL", THIS SHEET.
4. TRACK LAYOUT AND EVENT MARKINGS LAYOUT SHALL BE IN ACCORDANCE WITH NATIONAL FEDERATION OF STATE HIGH SCHOOL ASSOCIATIONS STANDARDS.
5. CONCRETE RADIUS MONUMENT TO BE CONSTRUCTED AT EACH RADIUS POINT. SEE "CONCRETE RADIUS MONUMENT DETAIL" THIS SHEET.

400 METER TRACK LAYOUT DETAIL

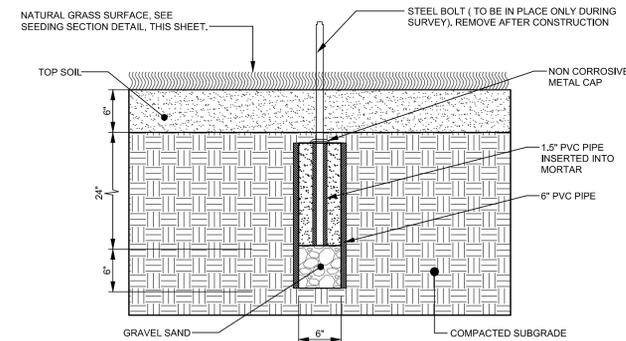
SCALE: 1" = 40'



TOP 12" OF SUBGRADE SHALL BE COMPACTED TO 95% OF THE MODIFIED PROCTOR STANDARD DRY DENSITY AS DETERMINED BY THE MODIFIED PROCTOR TEST, ASTM D 1557

TRACK PAVEMENT SECTION

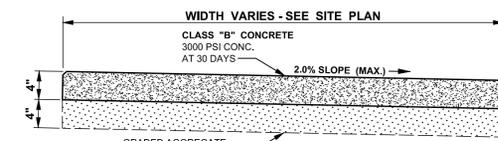
NO SCALE



NOTE: RADIUS MONUMENT IS TO BE CONSTRUCTION PER CURRENT NFHS & ASBA STANDARDS

CONCRETE RADIUS MONUMENT DETAIL

SCALE: 1" = 1'



- NOTES:
1. MARK IN 4' SQUARES. USE PREMOLDED EXPANSION JOINTS AT INTERVALS NOT GREATER THAN 16'
 2. CONCRETE SIDEWALKS SHALL BE CONSTRUCTED AS PER SPECIFICATIONS.

CONCRETE SIDEWALK DETAIL

NO SCALE

BMG NO.: SW-03C



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SHEET TITLE

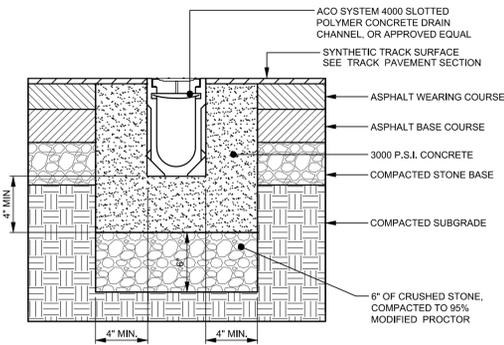
CONSTRUCTION DETAILS

ISSUE BLOCK

MARK	DATE	DESCRIPTION
LAYERSTATE	C-902	
PROJECT NO.:	2013222.01	
DATE:	6/30/17	
SCALE:	AS SHOWN	
DRAWN BY:	A.P.C.	PROJ. MGR.: J.S.F.

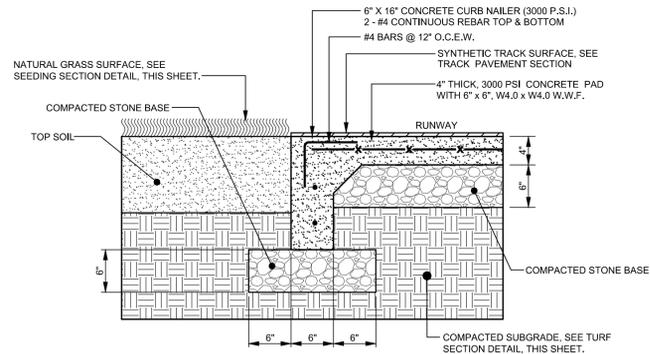
SHEET
C-902

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TRACK TO HIGH JUMP SURFACE CONNECTION DETAIL

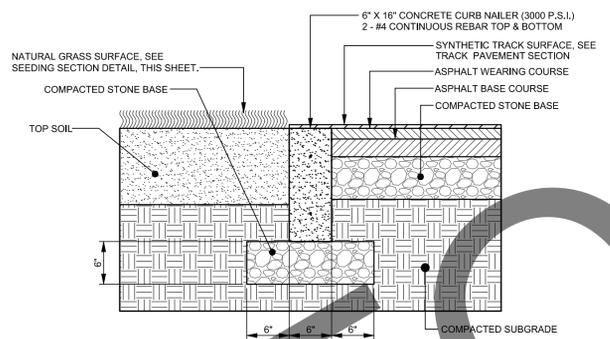
NO SCALE



NOTE: TO BE INSTALLED AT LONG JUMP AND POLE VAULT RUNWAYS AND LANDING PAD

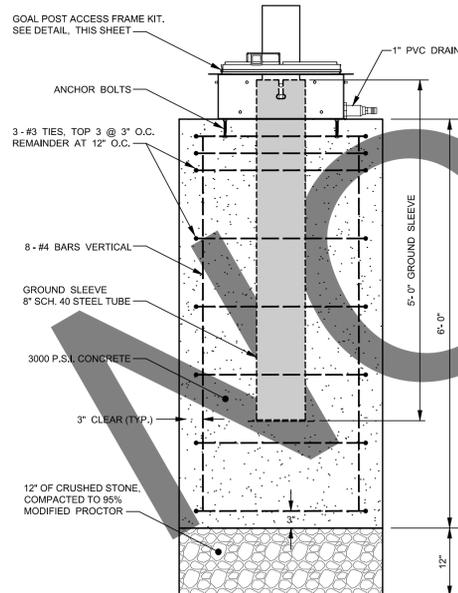
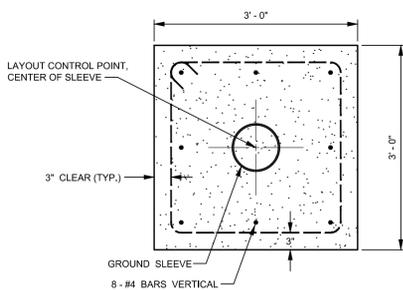
CONCRETE RUNWAY DETAIL

SCALE: 1" = 1'



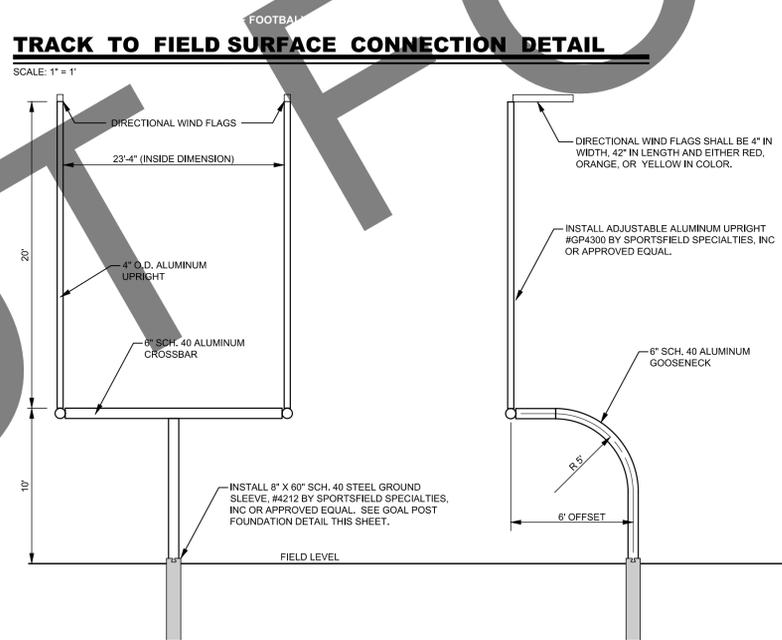
TRACK TO FIELD SURFACE CONNECTION DETAIL

SCALE: 1" = 1'



GOAL POST FOUNDATION DETAIL

NO SCALE



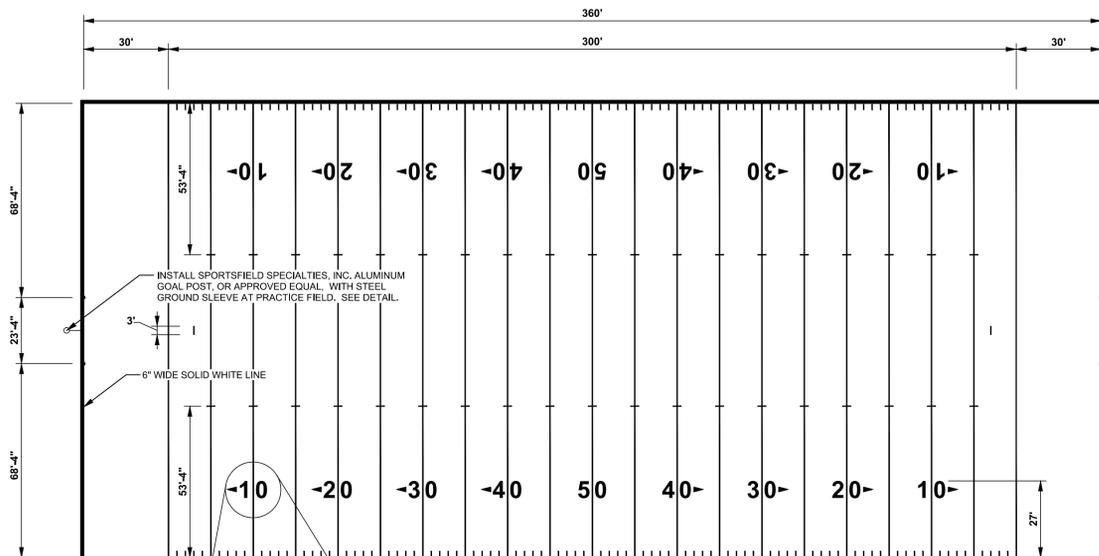
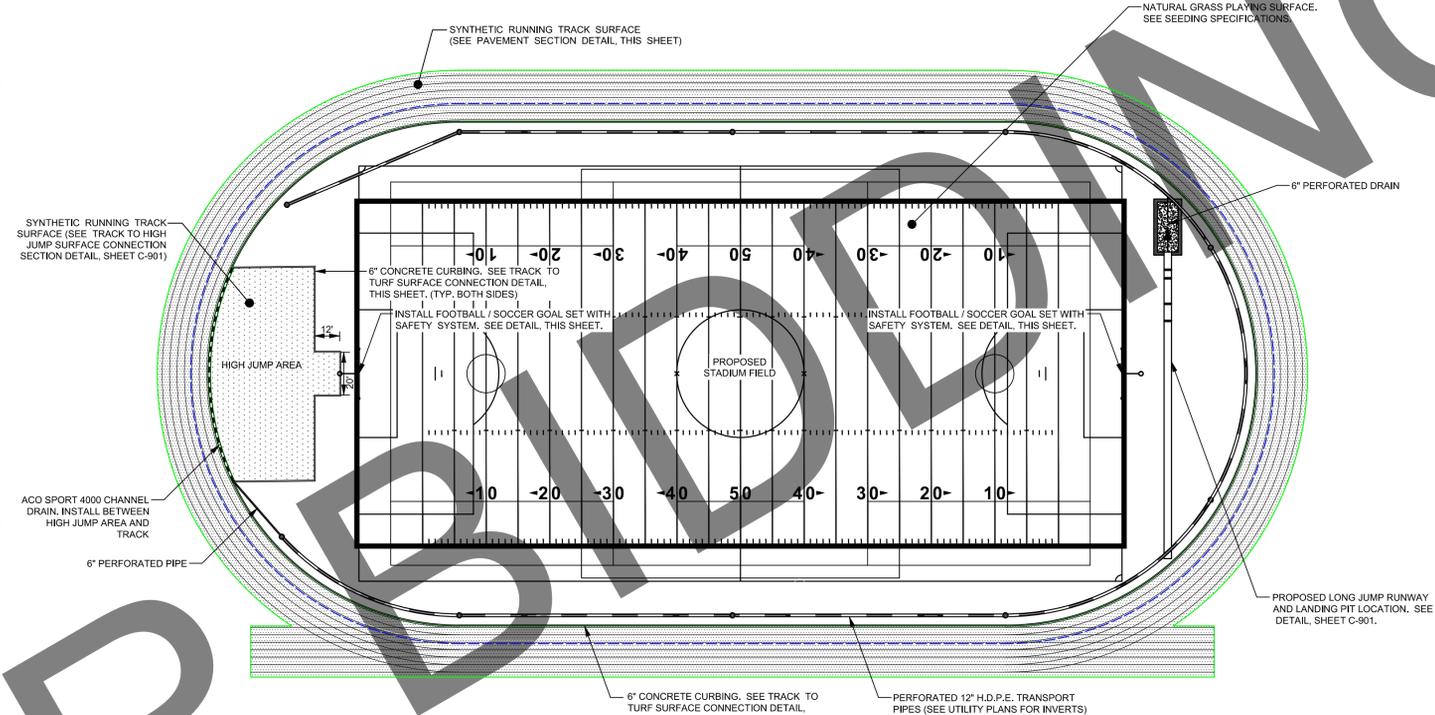
NOTE:
1. THE GOAL POSTS SHALL BE PADDED WITH RESILIENT, SHOCK-ABSORBING MATERIAL TO A HEIGHT OF AT LEAST 6 FEET ABOVE THE GROUND. SPORTSFIELD SPECIALTIES, INC. GP4590RPART OR EQUAL.

PROPOSED FOOTBALL GOAL POST DETAIL

NO SCALE

PROPOSED STADIUM LAYOUT

SCALE: 1" = 40'



NOTE:

1. ENDLINES AND SIDELINES SHALL BE 6 INCHES IN WIDTH ON PRACTICE FIELD, 24" IN WIDTH ON MAIN STADIUM FIELD. ALL OTHER FIELD DIMENSION LINES SHOULD BE MARKED 4 INCHES IN WIDTH.
2. YARD LINES SHALL BE MARKED WITH A CONTINUOUS LINE EVERY 5 YARDS BEGINNING AND ENDING 4 INCHES FROM EACH SIDELINE.
3. INBOUNDS LINES "A SERIES OF HASH MARKS" SHOULD BE 24 INCHES IN LENGTH AND 4 INCHES IN WIDTH AND SHALL BE LOCATED 53 FEET, 4 INCHES FROM AND PARALLEL WITH EACH SIDELINE DIVIDING THE FIELD LONGITUDINALLY IN THIRDS. THE INBOUND LINES SHALL BE MARKED SO THAT EACH 5-YARD LINE BISECTS THE HASH MARK.
4. A LINE, 4 INCHES WIDE AND A MINIMUM OF 24 INCHES IN LENGTH, SHALL BE CENTERED IN THE FIELD OF PLAY, THREE YARDS FROM EACH GOAL LINE.
5. LINES SHALL BE MARKED WITH A NONCAUSTIC, NONTOXIC MATERIAL DESIGNED FOR MARKING FIELDS SUCH AS POWDERED GYPSUM, CALCIUM CARBONATE AND LIQUID AEROSOL PAINT. IT IS RECOMMENDED THAT THESE LINES BE WHITE, NEITHER LIME, HYDRATED LIME OR OTHER CHEMICAL DERIVATIVES OF LIME, NOR CAUSTIC MATERIAL OF ANY KIND MAY BE USED FOR MARKING FOOTBALL FIELDS.

FOOTBALL STRIPING DIMENSIONS

SCALE 1" = 30'



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SCHOOLS OF
SCIENCE:
ATHLETIC
FIELDS
PHASE 2**

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NEW CASTLE COUNTY

SHEET TITLE

**CONSTRUCTION
DETAILS**

ISSUE BLOCK

MARK DATE DESCRIPTION

LAYER STATE C-903

PROJECT NO.: 2013222.01

DATE: 6/30/17

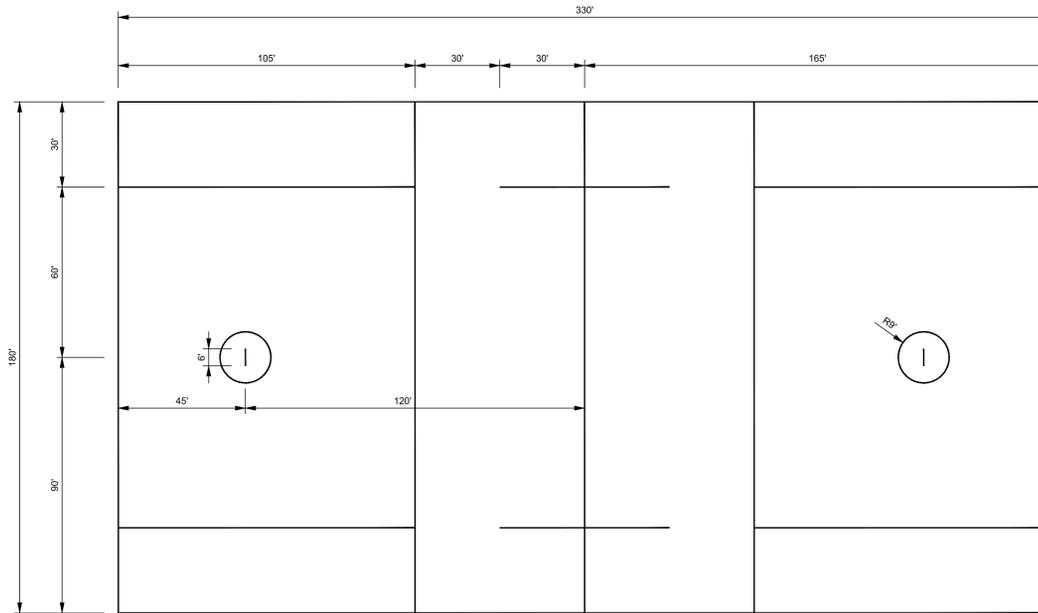
SCALE: AS SHOWN

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SHEET

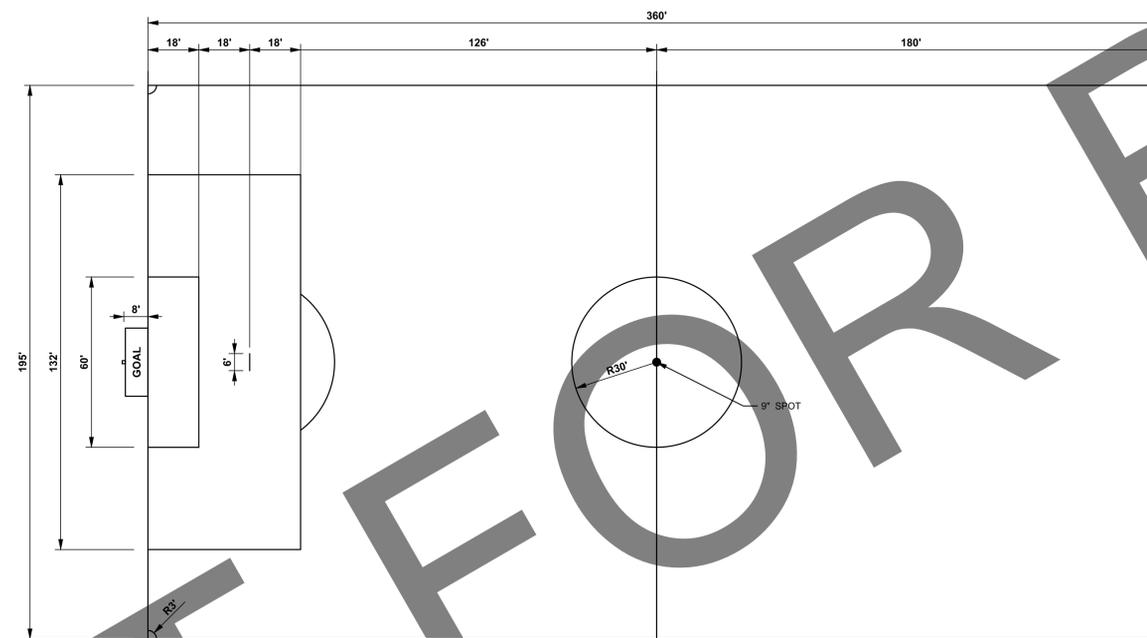
C-903

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BOYS' LACROSSE STRIPING DIMENSIONS

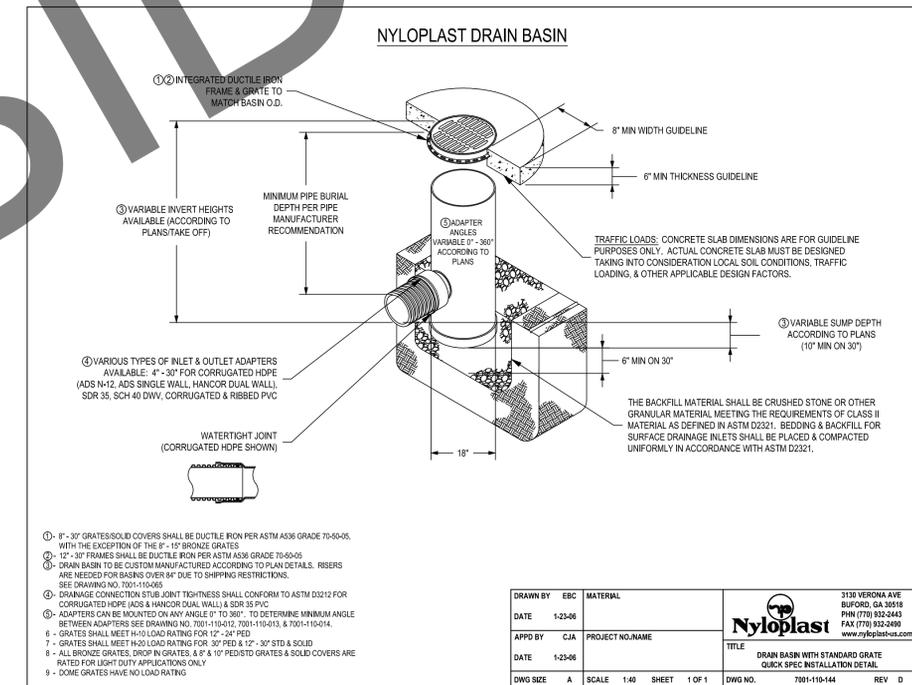
SCALE 1" = 30'



SOCCER STRIPING DIMENSIONS

NOTE:

FIELD DIMENSIONS SHALL BE IN ACCORDANCE WITH NATIONAL FEDERATION OF STATE HIGH SCHOOL ASSOCIATIONS STANDARDS.
ALL FIELD STRIPING SHALL BE PERMANENTLY STRIPED LINES AND IN ACCORDANCE WITH NATIONAL FEDERATION OF STATE HIGH SCHOOL ASSOCIATIONS STANDARDS.



NYLOPLAST DRAIN BASIN DETAIL

NO SCALE