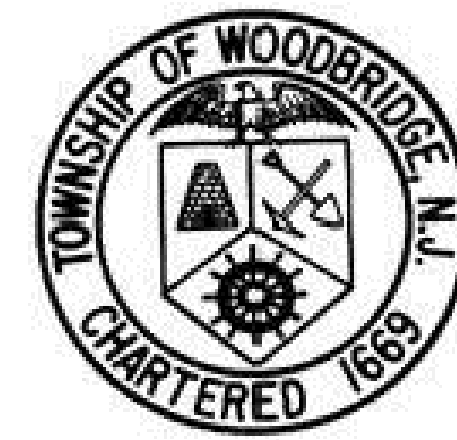


# TOWNSHIP OF WOODBRIDGE

## MIDDLESEX COUNTY, NEW JERSEY

### CONRAIL UTILITY RELOCATION AT CYPRESS PARK



**APRIL 2021**

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UTILITIES	
<b>ELECTRIC</b> PUBLIC SERVICE ELECTRIC AND GAS CO. 472 WESTON CANAL ROAD SOMERSET, NJ 08873 ATTN : BURK LAMBERTSON (732) 764-3160	<b>GAS</b> BUCKEYE PARTNERS, LP 9999 HAMILTON BOULEVARD BREINGSVILLE, PA 18031 ATTN: DAVE JONES (610) 904-4401
<b>CABLE</b> COMCAST CABLE 800 RAHWAY AVENUE UNION, NJ 07083 ATTN: PHILIP GIBSON (908) 624-6779	<b>COLONIAL PIPELINE</b> 400 BLAIR ROAD AVENEL, NJ 07701 ATTN: TODD RUTLEDGE (609) 658-8509
<b>WATER</b> MIDDLESEX WATER COMPANY ENGINEERING DEPARTMENT 1500 RONSON ROAD, P.O. BOX 1500 ISELIN, NJ 08830-0452 ATTN: ISIDRO BUEN (732) 638-7533	<b>ELIZABETHTOWN GAS CO.</b> 520 GREEN LANE UNION, NJ 07083 ATTN: GREG BALINT (908) 662-8321
<b>TELEPHONE/COMMUNICATIONS</b> VERIZON-NEW JERSEY, INC. 657 FLORIDA GROVE ROAD HOPELAWN, NJ 08861 ATTN: THOMAS GRABOWSKI (732) 874-6187	<b>PRAXAIR INC.</b> 60 CROWS MILL ROAD KEASBEY, NJ 08832 ATTN: MIKE WILDAY (732) 423-7062
<b>AT&amp;T</b> 1300 WHITE HORSE HAMILTON SQUARE ROAD HAMILTON, NJ 08690 ATTN: JOE MARKAWICZ (973) 584-9917	<b>SANITARY SEWER</b> TOWNSHIP OF WOODBRIDGE DIVISION OF ENGINEERING 1 MAIN STREET WOODBRIDGE, NJ 07095 ATTN: MICHAEL GELIN (732) 602-6047
	<b>CONRAIL</b> CONSOLIDATED RAIL CORPORATION 330 FELLOWSHIP ROAD MOUNT LAUREL, NJ 08054 ATTN: RYAN HILL (856) 231-2016

**JOHN E. McCORMAC - MAYOR**

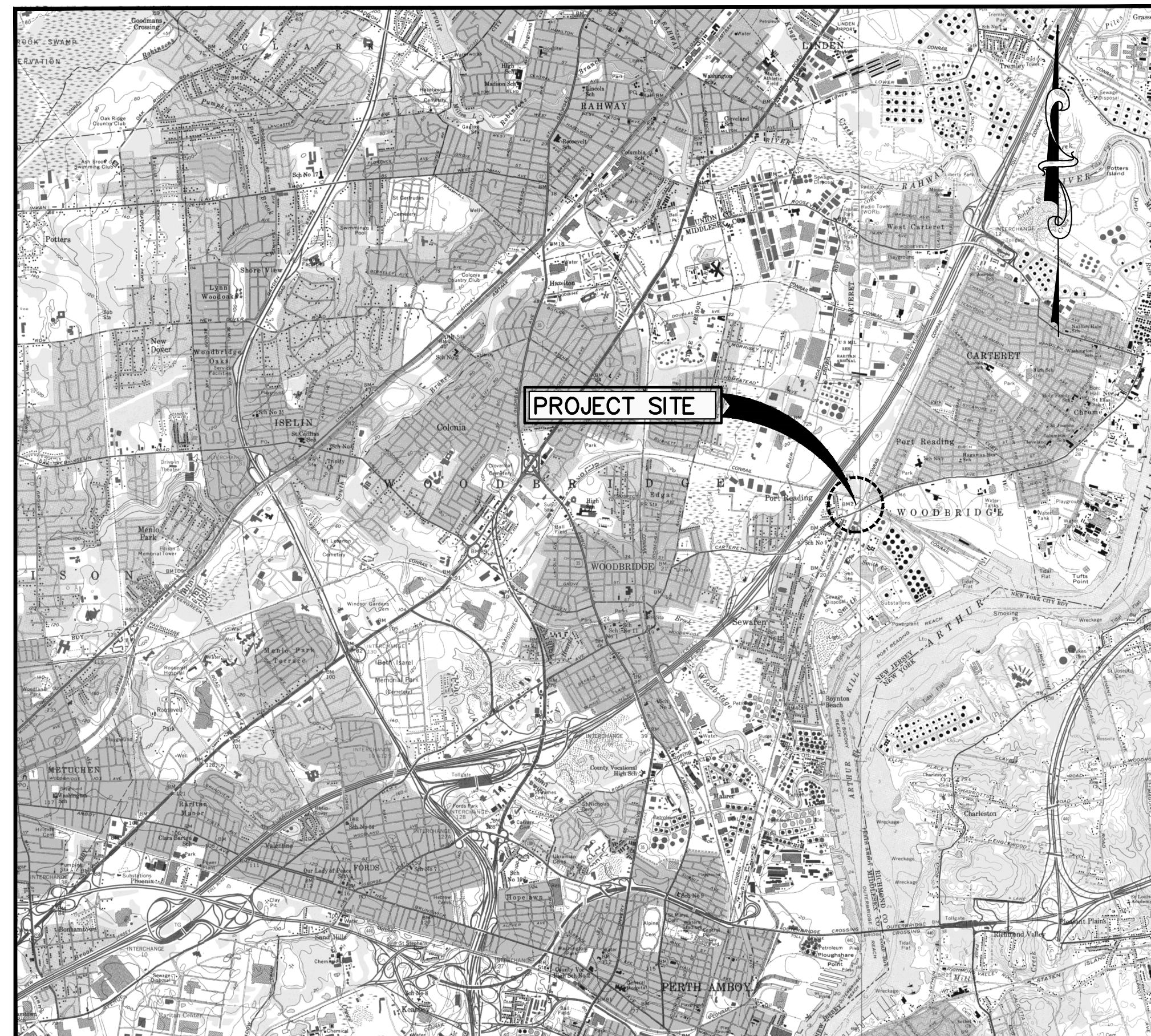
#### TOWNSHIP COUNCIL

**BRIAN SMALL**  
**HOWIE BAUER**  
**NANCY DRUMM**  
**CORY SPILLAR**  
**VIRBHADRA N. PATEL**  
**DEBBIE MEEHAN**  
**KYLE ANDERSON**  
**GREGG M. FICARRA**  
**LIZBETH DEJESUS**

**COUNCIL PRESIDENT**  
**COUNCIL VICE PRESIDENT**  
**COUNCILWOMAN**  
**COUNCILMAN**  
**COUNCILMAN**  
**COUNCILWOMAN**  
**COUNCILMAN**  
**COUNCILMAN**  
**COUNCILWOMAN**

**VITO CIMILLUCA**  
**JOHN M. MITCH**  
**JAMES P. NOLAN, JR., ESQ.**  
**GEORGE T. BREW**  
**MICHAEL GELIN, P.E.**

**BUSINESS ADMINISTRATOR**  
**MUNICIPAL CLERK**  
**DIRECTOR OF LAW**  
**DIRECTOR OF PUBLIC WORKS**  
**MUNICIPAL ENGINEER**



**LOCATION MAP**

SCALE: N.T.S.

NEW JERSEY DEPARTMENT OF TRANSPORTATION, STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION OF 2019 AND ALL AMENDMENTS IN CME ASSOCIATES FORMAT THERETO SHALL GOVERN.

THE HEADING OF THE ARTICLES CONTAINED HEREIN CONFORM TO THE NEW JERSEY DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATION FOR ROAD AND BRIDGE CONSTRUCTION, DATED 2019 AND ALL ADDENDA THERETO, WHICH IS TO BE USED IN THE EXECUTION OF THIS CONTACT.

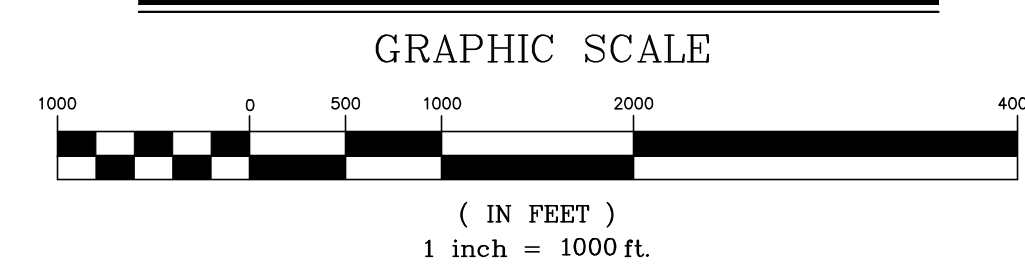
THE NEW JERSEY DEPARTMENT OF TRANSPORTATION "STANDARD ROADWAY CONSTRUCTION/TRAFFIC CONTROL/BRIDGE CONSTRUCTION DETAILS" BOOKLET DATED 2016 AND "ELECTRICAL BUREAU STANDARD DETAILS" (2007) TO GOVERN, EXCEPT FOR THOSE DETAILS CONTAINED HEREIN.

PREPARED BY:  
**NOT FOR CONSTRUCTION**  
**MICHAEL J. McCLELLAND, P.E.**  
NEW JERSEY PROFESSIONAL ENGINEER LICENSE No. 32468





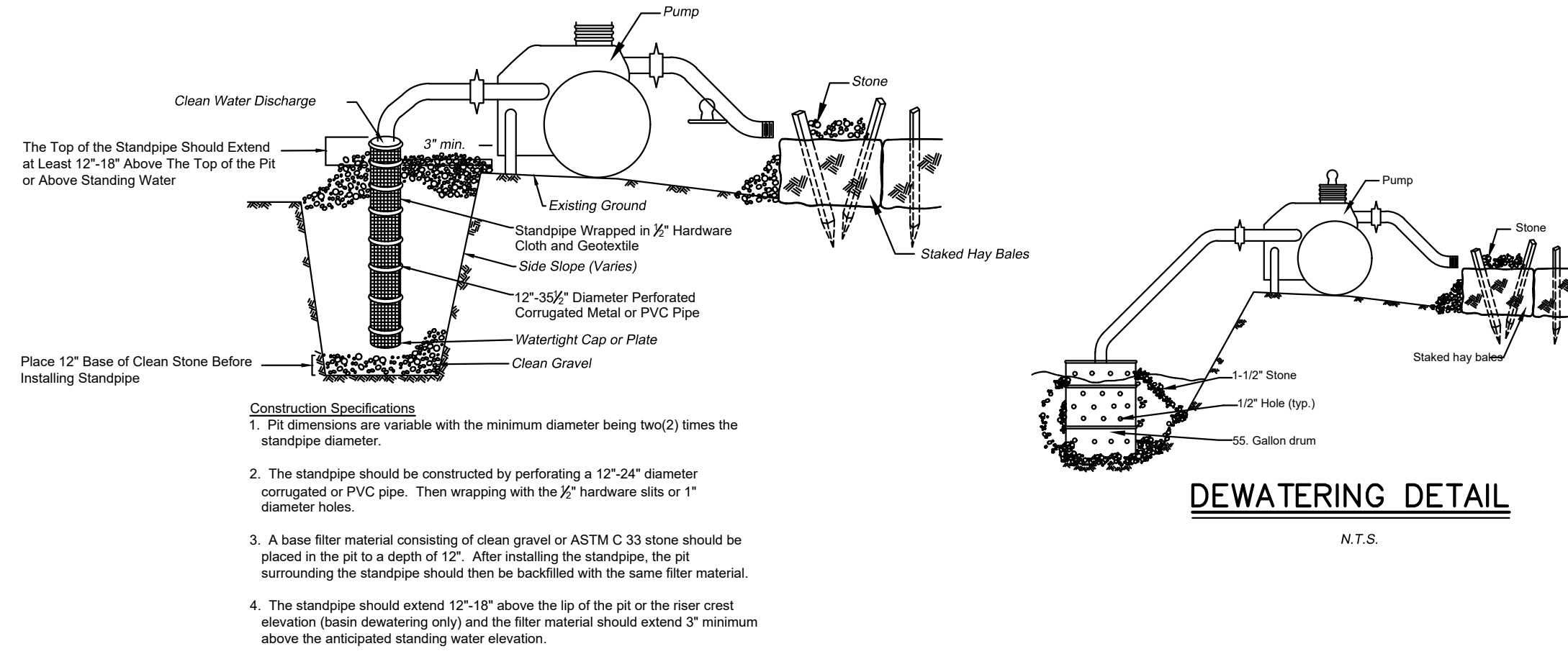
LOCATION PLAN



GENERAL CONSTRUCTION NOTES:

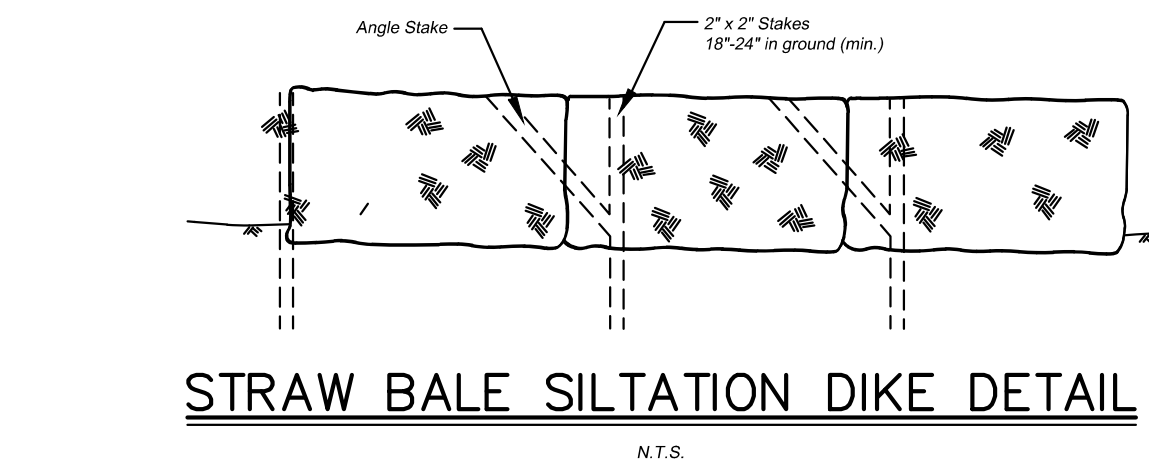
1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS NECESSARY FOR CONSTRUCTION IN ACCORDANCE WITH EXISTING LOCAL, COUNTY, OR STATE REGULATIONS, OR ANY OTHER AGENCY HAVING JURISDICTION IN THESE MATTERS.
2. THE CONTRACTOR IS RESPONSIBLE FOR AND SHALL VERIFY ALL DIMENSIONS AND DETAILS BEFORE PROCEEDING WITH WORK. ANY DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE ENGINEER.
3. ALL RE-GRADED AREAS AT THE SITE WHICH ARE NOT DESIGNATED AS PAVED OR GRAVEL AREAS SHALL BE TOPSOILED AND SEEDING AND SHALL BE STABILIZED IN ACCORDANCE WITH STANDARDS FOR SOIL EROSION AND SEDIMENT CONTROL IN NEW JERSEY AND THE CONTRACT SPECIFICATIONS.
4. ALL GRADING OPERATIONS SHALL PROVIDE FOR POSITIVE DRAINAGE AWAY FROM ALL BUILDINGS AND STRUCTURES AND SHALL ELIMINATE PONDING AREAS.
5. THE CONTRACTOR IS RESPONSIBLE TO COORDINATE THE LOCATION OF THE UTILITIES WITH THE UTILITY COMPANIES PRIOR TO CONSTRUCTION.
6. THE COORDINATION OF THE LOCATION OR RELOCATION WHERE REQUIRED OF TELEPHONE, ELECTRIC, GAS, AND WATER FACILITIES IS THE RESPONSIBILITY OF THE CONTRACTOR AND SAME SHALL BE COORDINATED TO INSURE COMPLETION WITHIN THE TIME PERMITTED.
7. THE CONTRACTOR IS RESPONSIBLE TO MAINTAIN MEANS OF SAFE INGRESS AND EGRESS TO RESIDENTS THROUGHOUT THE COURSE OF THE WORK AND TO PROVIDE FOR THE SAFE MAINTENANCE AND PROTECTION OF TRAFFIC.
8. THE CONTRACTOR'S LICENSED SURVEYOR SHALL PROVIDE THE CONSTRUCTION STAKEOUT FOR THE PROJECT.
9. THE CONTRACTOR WILL NOT BE PERMITTED TO STOCKPILE EXCAVATED MATERIALS OVER EXISTING UTILITY LINES. THE STOCKPILED MATERIALS SHOULD BE PLACED SUFFICIENTLY AWAY FROM THE EDGE OF ANY EXCAVATION TO PREVENT CAVING OF THE TRENCH WALL AND TO PERMIT SAFE ACCESS ALONG THE TRENCH. WITH SHEETED TRENCHES, A MINIMUM OF FIVE (5) FEET FROM THE EDGE OF SHEETING TO TOE OF SPOIL BANK MUST BE MAINTAINED.
10. THE CONTRACTOR SHALL TAKE EVERY PRECAUTION NECESSARY TO PRECLUDE DAMAGE TO EXISTING STRUCTURES, FACILITIES, AND UTILITIES DUE TO LOSS OF LATERAL SUPPORT AND/OR CONSTRUCTION LOADINGS. SPECIFIC DETAILS NECESSARY TO ACCOMPLISH SAME SHALL BE SUBMITTED BY THE CONTRACTOR FOR REVIEW AND APPROVAL PRIOR TO COMMENCING CONSTRUCTION OF THE PROPOSED MAIN.
11. ALL WORK BY THE CONTRACTOR SHALL BE DONE IN ACCORDANCE WITH THE PROVISIONS OF THE NEW JERSEY STATUTE KNOWN AS CHAPTER 249 OF THE LAWS OF 1948, BEING SECTIONS 34-6-47.1 TO 47.9, INCLUSIVE OF THE REVISED STATUTES OF NEW JERSEY, 1937, AND IN ACCORDANCE WITH THE RULES AND REGULATIONS CONCERNING PRECAUTIONS TO BE TAKEN IN THE PROXIMITY OF HIGH-VOLTAGE LINES FOR THE PREVENTION OF ACCIDENTS PROMULGATED BY THE COMMISSIONER OF THE DEPARTMENT OF LABOR AND INDUSTRY OF THE STATE OF NEW JERSEY, EFFECTIVE DECEMBER 28, 1948 ALL AS AMENDED AND SUPPLEMENTED, AND IN ACCORDANCE WITH THE PROVISIONS OF THE FEDERAL OCCUPATIONAL SAFETY AND HEALTH ACT OF 1970 AND OF SUBPART N, PARAGRAPH 1926.550 OF THE RULES AND REGULATIONS ISSUED UNDER SAID ACT.
12. THE CONTRACTOR IS HEREBY ADVISED THAT ALL WORK TO BE PERFORMED SHALL BE GOVERNED BY THE LOCAL MUNICIPAL ORDINANCES. THIS SHALL INCLUDE THE PROVISIONS IN THEIR CODES WHICH SET FORTH PERMITTED HOURS OF CONSTRUCTION WITHIN THE MUNICIPALITY.
13. THE CONTRACTOR IS ADVISED THAT THEY ARE RESPONSIBLE TO PAY FOR, ACQUIRE AND COMPLY WITH ROAD OPENING PERMITS, IF REQUIRED IN CONJUNCTION WITH THE PROPOSED IMPROVEMENTS.
14. THE CONTRACTOR SHALL COMPLY WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES BY THE U.S.D.O.T.
15. THE CONTRACTOR IS ADVISED THAT HE MUST MAINTAIN A MINIMUM OF ONE LANE OF TRAFFIC IN EACH DIRECTION AT ALL TIMES AND MUST COMPLETELY BACKFILL ALL TRENCHES PRIOR TO DAYLIGHT HOURS. MAINTENANCE AND PROTECTION OF TRAFFIC SHALL BE COORDINATED WITH THE LOCAL POLICE DEPARTMENT.
16. IN ORDER TO MAINTAIN ONE LANE OF TRAFFIC IN EACH DIRECTION, THE CONTRACTOR MAY FIND IT NECESSARY TO UTILIZE STEEL PLATES OVER TRENCHES AT NO ADDITIONAL COST TO THE OWNER.
17. WHEN DISTURBING, REMOVING AND/OR DISPOSING OF ASBESTOS CEMENT PIPE, THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE FEDERAL, STATE AND LOCAL REQUIREMENTS INCLUDING BUT NOT LIMITED TO: CURRENT USEPA REGULATIONS (NESHAP, 40 CFR 61 SUBPART M); OSHA REGULATIONS (29 CFR 1926.58); THE CURRENT NEW JERSEY ASBESTOS HAZARD ABATEMENT SUBCODE (N.J.A.C. 5:23-8); THE CURRENT NJDEP REGULATIONS (N.J.A.C. 7:26-1 ET. SEQ.); AND NOTIFICATION REGULATIONS (N.J.A.C. 5:23-8.6, 40 CFR 61 SUBPART M, AND N.J.A.C. 7:26-2.12).
18. THE FREEHOLD SOIL CONSERVATION DISTRICT GOVERNS SOIL EROSION AND SEDIMENT CONTROL MEASURES WITHIN THE PROJECT AREA. ACCORDINGLY ALL SOIL EROSION AND SEDIMENT CONTROL MEASURES ARE TO BE INSTALLED AS PER THE REQUIREMENTS OF THE FREEHOLD SOIL CONSERVATION DISTRICT AND AS DIRECTED BY THE ENGINEER.
19. AT CERTAIN TIMES THE SITE MAY BE OCCUPIED BY SEVERAL CONTRACTORS AND IT IS THEREFORE REQUIRED FOR ANY AND ALL CONTRACTORS OCCUPYING THE SITE TO COOPERATE WITH ONE ANOTHER. NO DELAYS RESULTING FROM MULTIPLE CONTRACTORS WORKING ON THE SITE WILL BE CONSIDERED.
20. THE CONTRACTOR SHALL CONTINUOUSLY DEWATER ALL EXCAVATIONS UNTIL BACKFILLING OPERATIONS HAVE BEEN COMPLETED. PRIOR TO DISCHARGE TO STREAMS, SILT SHALL BE SETTLED OUT IN AN APPROVED SETTLING BASIN.
21. THE CONTRACTOR SHALL MAINTAIN THE FLOW OF ALL STREAMS, DRAINAGE DITCHES, STORM SEWERS AND SANITARY SEWERS AT ALL TIMES BY A MEANS ACCEPTABLE TO THE ENGINEER AND ALL THE RESPONSIBLE AGENCIES.
22. THE CONTRACTOR SHALL MAINTAIN ALL UTILITY SERVICE FLOWS AND PRESSURES UNLESS WRITTEN APPROVAL BY THE RESPONSIBLE UTILITY PERMITS HIM TO DO OTHERWISE.
23. THE CONTRACTOR SHALL COMPLY WITH ALL REQUIREMENTS OF THE STATE OF NEW JERSEY WORKER HEALTH AND SAFETY ACT (N.J.A.C. 12:10 ET. SEQ.) AS AMENDED AND THE UNITED STATES OCCUPATIONAL SAFETY AND HEALTH ACT (OSHA) (29 CFR 1910), AS AMENDED WITH REGARD TO WORKER AND JOBSITE SAFETY.
24. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING SEWAGE FLOW THROUGHOUT THE DURATION OF THE PROJECT.
25. THE CONTRACTOR IS ADVISED THAT THE CONTRACT INCLUDES CONNECTIONS TO THE EXISTING SEWER MAINS. ALL CONNECTIONS AND OTHER WORK WHICH MAY HAVE AN INFLUENCE, OR EFFECT THE OPERATION OF THE MAINS SHALL BE SCHEDULED IN CONJUNCTION WITH THE OWNER. THE CONTRACTOR SHALL COOPERATE AT ALL TIMES WITH THE OWNER TO MAINTAIN SATISFACTORY OPERATION OF THEIR FACILITIES.
26. THE FITTING TYPE AND LOCATIONS SHOWN ON THE CONTRACT DRAWINGS HAVE BEEN PROVIDED FOR GENERAL INFORMATION PURPOSES ONLY. THE CONTRACTOR WILL BE REQUIRED TO PROVIDE FOR WHATEVER FITTINGS ARE NEEDED AT THE NECESSARY LOCATIONS IN ORDER TO COMPLETE THE SEWER MAIN REHABILITATION IN ACCORDANCE WITH THE CONTRACT DRAWINGS.
27. THE CONTRACTOR WILL BE REQUIRED TO MINIMIZE CONSTRUCTION TRAFFIC OVER EXISTING UTILITY LINES.
28. THE CONTRACTOR SHOULD BE AWARE OF THE FACT THAT WHERE EASEMENTS HAVE BEEN ACQUIRED FOR THE CONSTRUCTION OF THIS PROJECT, ONLY LIMITED ACCESS TO CERTAIN AREAS IS AVAILABLE. THE CONTRACTOR WILL NOT BE PERMITTED TO ENCROUGH ONTO THOSE PROPERTIES OUTSIDE THE LIMITS OF THE EASEMENTS AND RIGHT-OF-WAYS ASSOCIATED WITH THIS PROJECT UNLESS SPECIFIC PERMISSION IS RECEIVED FROM THE PROPERTY OWNER.
29. THE CONTRACTOR IS HEREBY ADVISED THAT PERMITS FROM VARIOUS AGENCIES SHAVE BEEN OBTAINED FOR THE CONSTRUCTION OF THIS PROJECT. THE CONTRACTOR WILL BE REQUIRED TO COMPLY WITH THE CONSTRUCTION, TRAFFIC PROTECTION, SAFETY AND NOTIFICATION PROVISIONS OF THESE PERMITS.
30. THE CONTRACTOR IS HEREBY ADVISED THAT THE WORK FOR THE PROPOSED SEWER MAIN IMPROVEMENTS IS TO BE PERFORMED WITHIN EASEMENTS AND ACROSS THE RIGHT-OF-WAYS OF MIDDLESEX COUNTY AND THE TOWNSHIP OF WOODBRIDGE. THE CONTRACTOR SHALL STRICTLY OBSERVE THE BOUNDARIES OF THESE EASEMENTS AND RIGHT-OF-WAYS AT ALL TIMES DURING CONSTRUCTION. ALL WORK WITHIN THESE AREAS SHALL BE COORDINATED WITH THE AFFECTED PROPERTY OWNER, UTILITY OR GOVERNING AGENCY. UPON COMPLETION OF THE PROJECT, THESE AREAS SHALL BE RESTORED TO BETTER THAN THEIR ORIGINAL CONDITION.
31. INFORMATION AS TO THE LOCATION OF EXISTING UTILITIES HAS BEEN COLLECTED FROM VARIOUS SOURCES. THE RESULTS OF SUCH INVESTIGATIONS ARE SHOWN ON THE CONTRACT DRAWINGS AND ARE NOT GUARANTEED AS TO ACCURACY. THE CONTRACTOR IS PARTICULARLY DIRECTED TO THE FACT THAT UNDERGROUND OBJECTS OR MATERIAL LOCATION ELEVATION, OR TYPE IS NOT WARRANTED TO BE APPROXIMATELY CORRECT (NOR CAN THEY BE ASSUMED TO BE THE ONLY SUBSURFACE OBJECTS OR MATERIAL WHICH MAY BE ENCOUNTERED IN THE WORK).
32. THE CONTRACTOR IS HEREBY ALERTED TO THE FACT THAT NUMEROUS UNDERGROUND UTILITY LINES ARE LOCATED ALONG THE PATH OF THE PROPOSED MAINS. THE CONTRACTOR WILL BE REQUIRED TO COORDINATE ALL WORK WITH THE AFFECTED UTILITY COMPANIES AND COMPLY WITH ANY SPECIAL CONSTRUCTION METHOD THAT THEY MAY REQUIRE.

NO.	DESCRIPTION OF REVISION	DATE	DRAWN	CHECKED	RELEASED
<b>TOWNSHIP OF WOODBRIDGE</b> MIDDLESEX COUNTY, NEW JERSEY <b>CONRAIL UTILITY RELOCATION AT CYPRESS PARK</b> LOCATION PLAN AND CONSTRUCTION NOTES					
(732) 727 8000 CONSULTING AND MUNICIPAL ENGINEERS (732) 462 7400 3141 BORDENTOWN AVENUE, PARLIN, NEW JERSEY 08859-1162 — 1460 ROUTE 9 SOUTH, HOWELL, NEW JERSEY 07731-1194					
JOHN H. ALLGAIER P.E. & P.P. 1993 - 2001 NJ PE LIC. NO. 25838 NJ PP LIC. NO. 2455	DAVID J. SAMUEL P.E. & P.P. NJ PE LIC. NO. 24271 NJ PP LIC. NO. 2089	JOHN J. STEFANI P.E. L.S. & P.P. NJ PE LIC. NO. 24271 NJ PP LIC. NO. 2089			
JAY B. CORNELL P.E. & P.P. NJ PE LIC. NO. 32468	MICHAEL J. MCLELLAND P.E. & P.P. NJ PE LIC. NO. 32468	GREGORY R. VALESI P.E. & P.P. NJ PE LIC. NO. 32468			
<b>MICHAEL J. MCLELLAND P.E.</b> NEW JERSEY PROFESSIONAL ENGINEER LIC. 32468			SCALE As Shown	DATE April 2021	DRAWING NO. PWB00207.01
<b>NOT FOR CONSTRUCTION</b>			DRAWN BY PB	DESIGNED BY PB	
			CHECKED BY	SHEET 2 of 7	



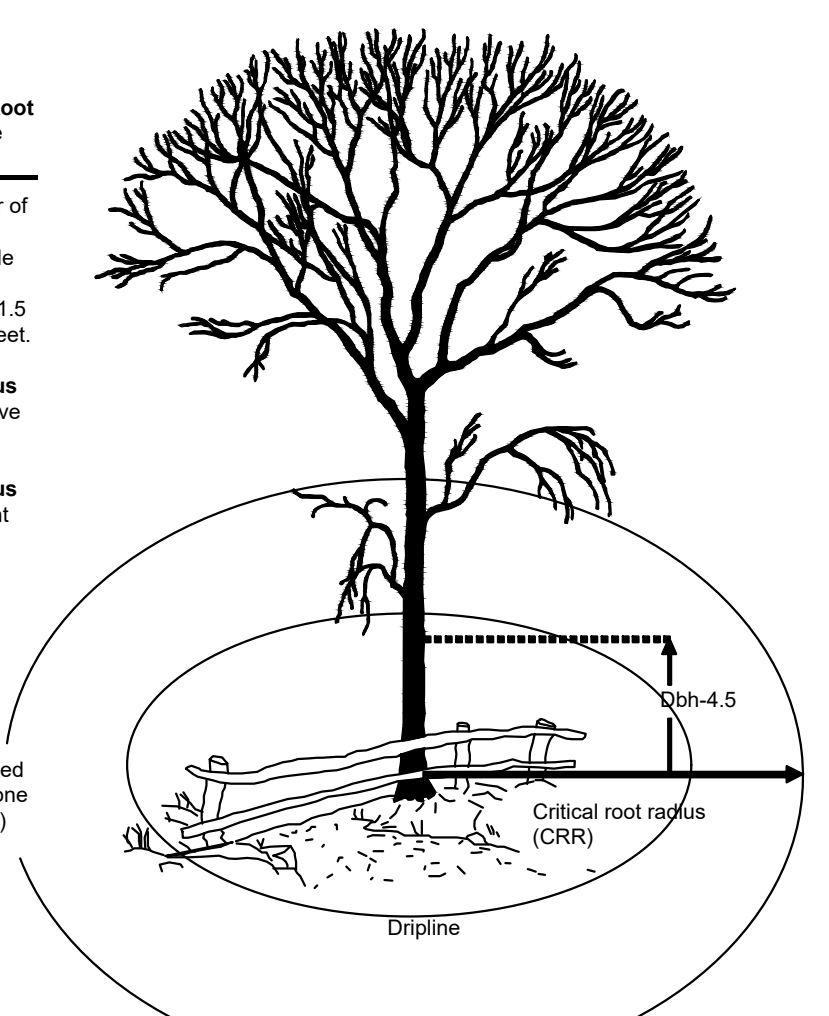
DEWATERING DETAIL  
N.T.S.

- Construction Specifications**
- Pit dimensions are variable with the minimum diameter being two(2) times the standpipe diameter.
  - The standpipe should be constructed by perforating a 12" diameter corrugated or PVC pipe. Then wrapping with the 1/2" hardware cloth or 1" diameter holes.
  - A base filter material consisting of clean gravel or ASTM C 33 stone should be placed in the pit to a depth of 12". After installing the standpipe, the pit surrounding the standpipe should then be backfilled with the same filter material.
  - The standpipe should extend 12"-18" above the lip of the pit or the riser crest elevation (basin dewatering only) and the filter material should extend 2" minimum above the anticipated standing water elevation.



STRAW BALE SILTATION DIKE DETAIL  
N.T.S.

- Estimate a tree's Protected Root Zone (PRZ) by calculating the Critical Root Radius (CRR).
- Measure the dbh (diameter of tree at breast height, 4.5 feet above ground on the uphill side of tree) in inches.
  - Multiply measured dbh by 1.5 or 1.0. Express the result in feet.
- Dbh x 1.5: Critical root radius for older, unhealthy, or sensitive species.
- Dbh x 1.0: Critical root radius for younger, healthy or tolerant species.



ROOT PROTECTION  
N.T.S.

ACID SOILS MITIGATION METHODS AND MATERIALS

- LIMIT THE EXCAVATION AREA AND EXPOSURE TIME WHEN HIGH ACID-PRODUCING SOILS ARE ENCOUNTERED.
- TOPSOIL STRIPPED FROM THE SITE SHALL BE STORED SEPARATELY FROM TEMPORARILY STOCKPILED HIGH ACID-PRODUCING SOILS.
- STOCKPILES OF HIGH ACID-PRODUCING SOIL SHOULD BE LOCATED ON LEVEL LAND TO MINIMIZE ITS MOVEMENT, ESPECIALLY WHEN THIS MATERIAL HAS A HIGH CLAY CONTENT.
- TEMPORARILY STOCKPILED HIGH ACID-PRODUCING SOIL MATERIAL TO BE STORED MORE THAN 48 HOURS SHOULD BE COVERED WITH PROPERLY ANCHORED, HEAVY GRADE SHEETS OF POLYETHYLENE WHERE POSSIBLE. IF NOT POSSIBLE, STOCKPILES SHALL BE COVERED WITH A MINIMUM OF 3 TO 6 INCHES OF WOOD CHIPS TO MINIMIZE EROSION OF THE STOCKPILE. SILT FENCE SHALL BE INSTALLED AT THE TOE OF THE SLOPE TO CONTAIN MOVEMENT OF THE STOCKPILED MATERIAL. TOPSOIL SHALL NOT BE APPLIED TO THE STOCKPILES TO PREVENT TOPSOIL CONTAMINATION WITH HIGH ACID-PRODUCING SOIL.
- HIGH ACID-PRODUCING SOILS WITH A PH OF 4.0 OR LESS OR CONTAINING IRON SULFIDE (INCLUDING BORROW FROM CUTS OR DREDGED SEDIMENT) SHALL BE ULTIMATELY PLACED OR BURIED WITH LIMESTONE APPLIED AT THE RATE OF 10 TONS PER ACRE (OR 450 POUNDS PER 1,000 SQUARE FEET OF SURFACE AREA) AND COVERED WITH A MINIMUM OF 12 INCHES OF SETTLED SOIL WITH A PH OF 5.0 OR MORE EXCEPT AS FOLLOWS:
  - AREAS WHERE TREES OR SHRUBS ARE TO BE PLANTED SHALL BE COVERED WITH A MINIMUM OF 24 INCHES OF SOIL WITH A PH OF 5 OR MORE.
  - DISPOSAL AREAS SHALL NOT BE LOCATED WITHIN 24 INCHES OF ANY SURFACE OF A SLOPE OR BANK, SUCH AS BERMS, STREAM BANKS, DITCHES, AND OTHERS, TO PREVENT POTENTIAL LATERAL LEACHING DAMAGES.
- EQUIPMENT USED FOR MOVEMENT OF HIGH ACID-PRODUCING SOILS SHOULD BE CLEANED AT THE END OF EACH DAY TO PREVENT SPREADING OF HIGH ACID-PRODUCING SOIL MATERIALS TO OTHER PARTS OF THE SITE INTO STREAMS OR STORMWATER CONVEYANCES, AND TO PROTECT MACHINERY FROM ACCELERATED RUSTING.
- NON-VEGETATIVE EROSION CONTROL PRACTICES (STONE TRACKING PADS, STRATEGICALLY PLACED LIMESTONE CHECK DAM, SEDIMENT BARRIER, WOOD CHIPS) SHOULD BE INSTALLED TO LIMIT THE MOVEMENT OF HIGH ACID-PRODUCING SOILS FROM, AROUND, OR OFF THE SITE.
- FOLLOWING BURIAL OR REMOVAL OF HIGH ACID-PRODUCING SOIL, TOPSOILING AND SEEDING OF THE SITE (SEE TEMPORARY VEGETATIVE COVER FOR SOIL STABILIZATION, PERMANENT VEGETATIVE COVER FOR SOIL STABILIZATION, AND TOPSOILING), MONITORING MUST CONTINUE FOR A MINIMUM OF 6 MONTHS TO ENSURE THERE IS ADEQUATE STABILIZATION AND THAT NO HIGH ACID-PRODUCING SOIL PROBLEMS EMERGE. IF PROBLEMS STILL EXIST, THE AFFECTED AREA MUST BE TREATED AS INDICATED ABOVE TO CORRECT THE PROBLEM.

TEMPORARY SEEDBED PREPARATIONS

- APPLY GROUND LIMESTONE AND FERTILIZER ACCORDING TO SOIL TEST RECOMMENDATIONS SUCH AS OFFERED BY RUTGERS CO-OPERATIVE EXTENSION. SOIL SAMPLE MAILERS ARE AVAILABLE FROM THE LOCAL RUTGERS CO-OPERATIVE EXTENSION OFFICES. FERTILIZER SHALL BE APPLIED AT THE RATE OF 600 POUNDS PER ACRE OR 11 POUNDS PER 1,000 SQUARE FEET OF 10-20-10 OR EQUIVALENT WITH 50% WATER INSOLUBLE NITROGEN UNLESS A SOIL TEST INDICATES OTHERWISE. APPLY LIMESTONE AT THE RATE OF 2 TONS/ACRE UNLESS SOIL TESTING INDICATES OTHERWISE. CALCIUM CARBONATE IS THE EQUIVALENT AND STANDARD FOR MEASURING THE ABILITY OF LIMING MATERIALS TO NEUTRALIZE SOIL ACIDITY AND SUPPLY CALCIUM AND MAGNESIUM TO GRASSES AND LEGUMES.
- WORK LIME AND FERTILIZER INTO THE SOIL AS NEARLY AS PRACTICAL TO A DEPTH OF 4 INCHES WITH A DISC, SPRING-TOOTH HARROW, OR OTHER SUITABLE EQUIPMENT. THE FINAL HARROWING OR DISKING OPERATION SHOULD BE ON THE GENERAL CONTOUR. CONTINUE TILLAGE UNTIL A REASONABLE UNIFORM SEEDBED IS PREPARED.
- INSPECT SEEDBED JUST BEFORE SEEDING. IF TRAFFIC HAS LEFT THE SOIL COMPACTED, THE AREA MUST BE RETILLED IN ACCORDANCE WITH THE ABOVE.
- SOILS HIGH IN SULFIDES OR HAVING A pH OF 4 OR LESS REFER TO STANDARD FOR MANAGEMENT OF HIGH ACID PRODUCING SOILS, PG 1-1.

SITE PREPARATION

- GRADE AS NEEDED AND FEASIBLE TO PERMIT THE USE OF CONVENTIONAL EQUIPMENT FOR SEEDBED PREPARATION, SEEDING, MULCH APPLICATION, AND MULCH ANCHORING. ALL GRADING SHOULD BE DONE IN ACCORDANCE WITH STANDARD FOR LAND GRADING.
- IMMEDIATELY PRIOR TO SEEDING AND TOPSOIL APPLICATION, THE SUBSOIL SHALL BE EVALUATED FOR COMPACTION IN ACCORDANCE WITH STANDARD FOR LAND GRADING.
- TOPSOIL SHOULD BE HANDLED ONLY WHEN IT IS DRY ENOUGH TO WORK WITHOUT DAMAGING THE SOIL STRUCTURE. A UNIFORM APPLICATION TO A DEPTH OF 5 INCHES (UNSETTLED) IS REQUIRED ON ALL SITES. TOPSOIL SHALL BE AMENDED WITH ORGANIC MATTER, AS NEEDED, IN ACCORDANCE WITH THE STANDARD FOR TOPSOILING.
- INSTALL NEEDED EROSION CONTROL PRACTICES OR FACILITIES SUCH AS DIVERSIONS, GRADE-STABILIZATION STRUCTURES, CHANNEL STABILIZATION MEASURES, SEDIMENT BASINS, AND WATERWAYS.

SOIL EROSION AND SEDIMENT CONTROL NOTES:

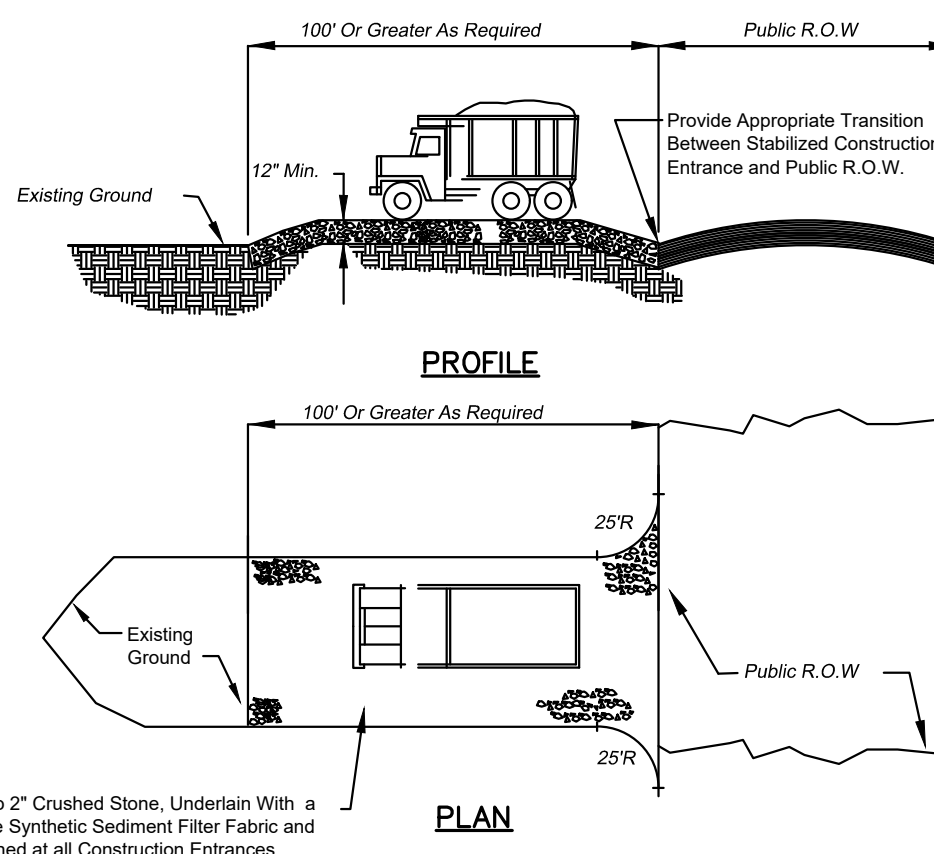
- THE FREEHOLD SOIL CONSERVATION DISTRICT SHALL BE NOTIFIED FORTY-EIGHT (48) HOURS IN ADVANCE OF ANY SOIL DISTURBING ACTIVITY.
- ALL SOIL EROSION AND SEDIMENT CONTROL PRACTICES ARE TO BE INSTALLED PRIOR TO SOIL DISTURBANCE, OR IN THEIR PROPER SEQUENCE, AND MAINTAINED UNTIL PERMANENT PROTECTION IS ESTABLISHED.
- ANY CHANGES TO THE CERTIFIED SOIL EROSION AND SEDIMENT CONTROL PLANS WILL REQUIRE THE SUBMISSION OF REVISED SOIL EROSION AND SEDIMENT CONTROL PLANS TO THE DISTRICT FOR RE-CERTIFICATION. ALL PLANS MUST MEET ALL CURRENT STATE SOIL EROSION AND SEDIMENT CONTROL STANDARDS.
- N.J.S.A. 4:24-39 ET SEQ. REQUIRES THAT NO CERTIFICATES OF OCCUPANCY BE ISSUED BEFORE THE DISTRICT DETERMINES THAT A PROJECT OR PORTION THEREOF IS IN FULL COMPLIANCE WITH THE CERTIFIED PLAN AND STANDARDS FOR SOIL EROSION AND SEDIMENT CONTROL. IN NEW JERSEY AND A REPORT OF COMPLIANCE HAS BEEN ISSUED. UPON WRITTEN REQUEST FROM THE APPLICANT, THE DISTRICT MAY ISSUE A REPORT OF COMPLIANCE WITH CONDITIONS ON A LOT-BY-LOT OR SECTION-BY-SECTION BASIS, PROVIDED THAT THE PROJECT OR PORTION THEREOF IS IN SATISFACTORY COMPLIANCE WITH THE SEQUENCE OF DEVELOPMENT AND TEMPORARY MEASURES FOR SOIL EROSION AND SEDIMENT CONTROL THAT HAVE BEEN IMPLEMENTED, INCLUDING PROVISIONS FOR STABILIZATION AND SITE WORK.
- ANY DISTURBED AREAS THAT WILL BE LEFT EXPOSED MORE THAN SIXTY (60) DAYS, AND NOT SUBJECT TO CONSTRUCTION TRAFFIC, WILL IMMEDIATELY RECEIVE A TEMPORARY SEEDING. IF THE SEASON PREVENTS THE ESTABLISHMENT OF A TEMPORARY COVER, THE DISTURBED AREAS WILL BE MULCHED WITH STRAW OR EQUIVALENT MATERIAL, AT A RATE OF 2 TO 2 1/2 TONS PER ACRE, ACCORDING TO STATE STANDARDS FOR STABILIZATION WITH MULCH ONLY.
- IMMEDIATELY FOLLOWING INITIAL DISTURBANCE OR ROUGH GRADING, ALL CRITICAL AREAS SUBJECT TO EROSION (i.e. STEEP SLOPES AND ROADWAY EMBANKMENTS) WILL RECEIVE TEMPORARY SEEDING IN COMBINATION WITH STRAW MULCH OR A SUITABLE EQUIVALENT, AND A MULCH ANCHOR, IN ACCORDANCE WITH STATE STANDARDS.
- A SUB-BASE COURSE WILL BE APPLIED IMMEDIATELY FOLLOWING ROUGH GRADING AND INSTALLATION OF UNFILTERED OPERATIONS TO MINIMIZE SEDIMENT TRANSFER. ANY DEWATERING METHODS USED MUST BE IN ACCORDANCE WITH STANDARDS FOR DEWATERING.
- SHOULD THE CONTROL OF DUST AT THE SITE BE NECESSARY, THE SITE WILL BE SPRINKLED UNTIL THE SURFACE IS WET, TEMPORARY VEGETATIVE COVER SHALL BE ESTABLISHED OR MULCH SHALL BE APPLIED AS REQUIRED BY THE STANDARD FOR DUST CONTROL.
- STOCKPILE AND STAGING LOCATIONS ESTABLISHED IN THE FIELD SHALL BE PLACED WITHIN THE LIMIT OF DISTURBANCE ACCORDING TO THE CERTIFIED PLAN. STAGING AND STOCKPILES NOT LOCATED WITHIN THE LIMIT OF DISTURBANCE WILL REQUIRE CERTIFICATION OF A REVISED SOIL EROSION AND SEDIMENT CONTROL PLAN. CERTIFICATION OF A NEW SOIL EROSION AND SEDIMENT CONTROL PLAN MAY BE REQUIRED FOR THESE ACTIVITIES IF AN AREA GREATER THAN 5,000 SQUARE FEET IS DISTURBED.
- ALL SOIL STOCKPILES ARE TO BE TEMPORARILY STABILIZED IN ACCORDANCE WITH SOIL EROSION AND SEDIMENT CONTROL NOTE #6.
- THE PROPERTY OWNER SHALL BE RESPONSIBLE FOR ANY EROSION OR SEDIMENTATION THAT MAY OCCUR BELOW STORM WATER OUTFALLS OR OFFSITE AS A RESULT OF CONSTRUCTION OF THE PROJECT.
- MAXIMUM SIDE SLOPES OF ALL EXPOSED SURFACES TO BE 3:1.
- HAY BALES OR SEDIMENT CONTROL FABRIC TO BE PLACED IF EROSION BECOMES EVIDENT DURING CONSTRUCTION.
- TO PREVENT LARGE BILLOWS DOWNHILL DURING CONSTRUCTION, TEMPORARY MOUNTABLE STONE BERMS MAY BE INSTALLED. SHOULD FIELD CONDITIONS WARRANT WHICH WILL NOT IMPED ACCESS FOR THE RESIDENTS AND EMERGENCY VEHICLES.
- THE CONTRACTOR WILL BE RESPONSIBLE FOR IMPLEMENTING ANY AND ALL SOIL EROSION AND SEDIMENT CONTROL PROCEDURES DEEMED NECESSARY BY THE FREEHOLD SOIL CONSERVATION DISTRICT OFFICE AGENTS DURING THE COURSE OF CONSTRUCTION.

TEMPORARY SEEDING SPECIFICATIONS

- APPLY 10-20-10 FERTILIZER AT A RATE OF 500 LBS. PER ACRE OR 11 LBS. PER 1,000 SQ. FEET.
- APPLY LIMESTONE AT A RATE OF 2 TONS PER ACRE OR 90 LBS. PER 1,000 SQ. FT. FOR SANDY LOAM.
- COOL SEASON GRASSES
- APPLY PERENNIAL RYE GRASS AT A RATE OF 100 LBS. PER ACRE OR 1 LB. PER 1,000 SQ. FT.
- APPLY SPRING OATS AT A RATE OF 86 LBS. PER ACRE OR 2 LBS. PER 1,000 SQ. FT.
- APPLY ANNUAL RYEGRASS AT A RATE OF 100 LBS. PER ACRE OR 1 LBS. PER 1,000 SQ. FT.
- APPLY WINTER BARLEY AT A RATE OF 96 LBS. PER ACRE OR 2.2 LBS. PER 1,000 SQ. FT.
- APPLY WINTER CEREAL RYE AT A RATE OF 112 LBS. PER ACRE OR 2.8 LBS. PER 1,000 SQ. FT.
- WARM SEASON GRASSES
- APPLY PEARL MILLET AT A RATE OF 20 LBS. PER ACRE OR 0.5 LBS. PER 1,000 SQ. FT.
- APPLY MILLET (GERMAN OR HUNGARIAN) AT A RATE OF 30 LBS. PER ACRE OR 0.7 LBS. PER SQ. FT.

NOTE:

There are to be no stockpiling areas under this project. All surplus excavated material and/or fill shall be removed or brought to the site on a daily basis.



STABILIZED CONSTRUCTION ENTRANCE  
N.T.S.

Soil Erosion and Sediment Control measures shall be installed as deemed necessary by the engineer and the Freehold Soil Conservation District.

SEDIMENT BARRIER:

SHOULD FIELD CONDITIONS WARRANT THE INSTALLATION OF A SEDIMENT BARRIER, IT WILL BE INSTALLED.

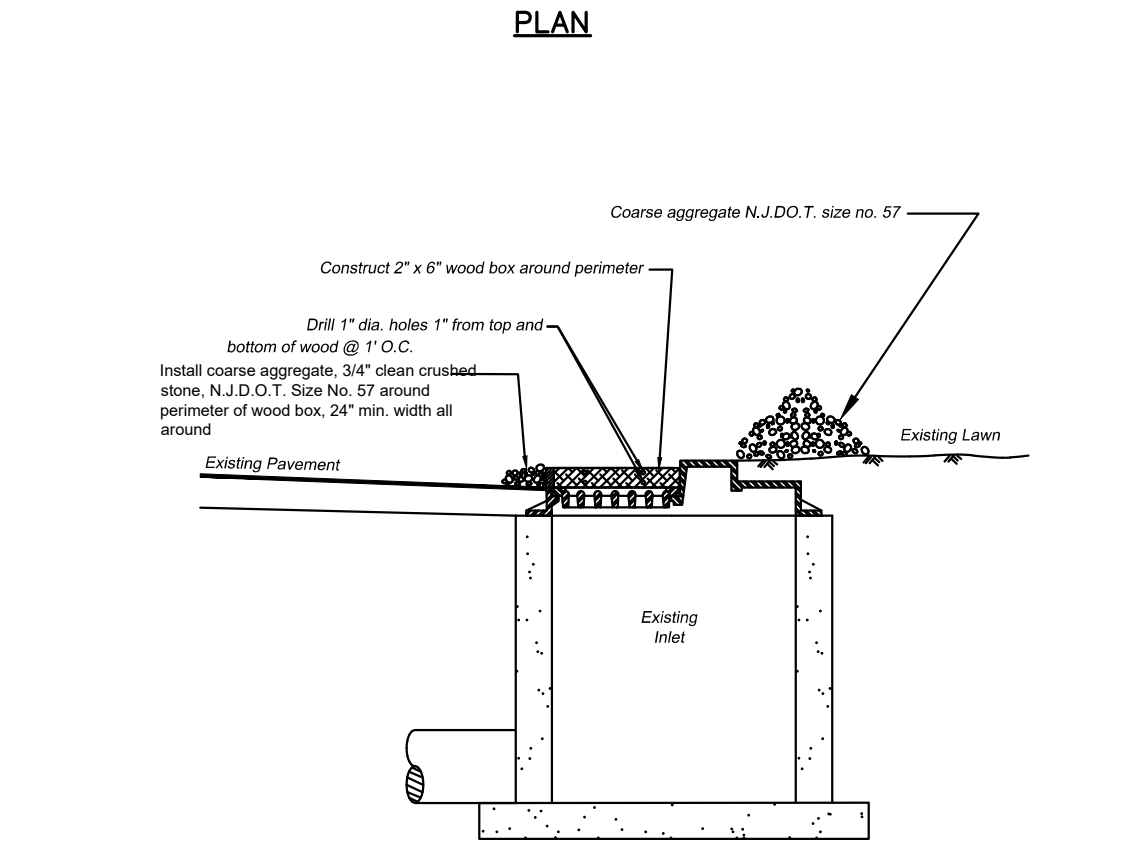
NON GROWING SEASON SOIL STABILIZATION:

DURING NON GROWING SEASONS EXPOSED SOILS SHOULD BE STABILIZED USING NON-VEGETATIVE MATERIALS SUCH AS UNROTTED SMALL-GRAIN STRAW, OR SALT HAY AT A RATE OF 2.0 TO 2.5 TONS PER ACRE SPREAD UNIFORMLY AT 90 TO 115 POUNDS PER 1,000 SQUARE FEET AND ANCHORED WITH A MULCH ANCHORING TOOL, ORGANIC MULCH BINDERS, NETTING THE DOWNS OR OTHER SUITABLE MATERIALS AS APPROVED BY THE FREEHOLD SOIL CONSERVATION DISTRICT.

This plan to be used for Soil Erosion and Sediment Control purposes only

CONSTRUCTION NOTES:

Inlet siltation protection to remain until completion of final grading and establishment of cover. Also, periodic checks must be made after each rainfall to excavate and remove excess sediment from around inlets.



INLET SILTATION PROTECTION DETAIL  
N.T.S.

INLET FILTER

N.T.S.

SILT STOP SEDIMENT BARRIER DETAIL

N.T.S.

TOWNSHIP OF WOODBRIDGE  
MIDDLESEX COUNTY, NEW JERSEY  
**CONRAIL UTILITY RELOCATION AT CYPRESS PARK**  
SOIL EROSION AND SEDIMENT CONTROL NOTES AND DETAILS

**CMG ASSOCIATES**  
CONSULTING AND MUNICIPAL ENGINEERS (732) 462-7400  
3141 BORDENTOWN AVENUE, PARLIN, NEW JERSEY 08859-1162 - 1460 ROUTE 9 SOUTH, HOWELL, NEW JERSEY 07731-1194

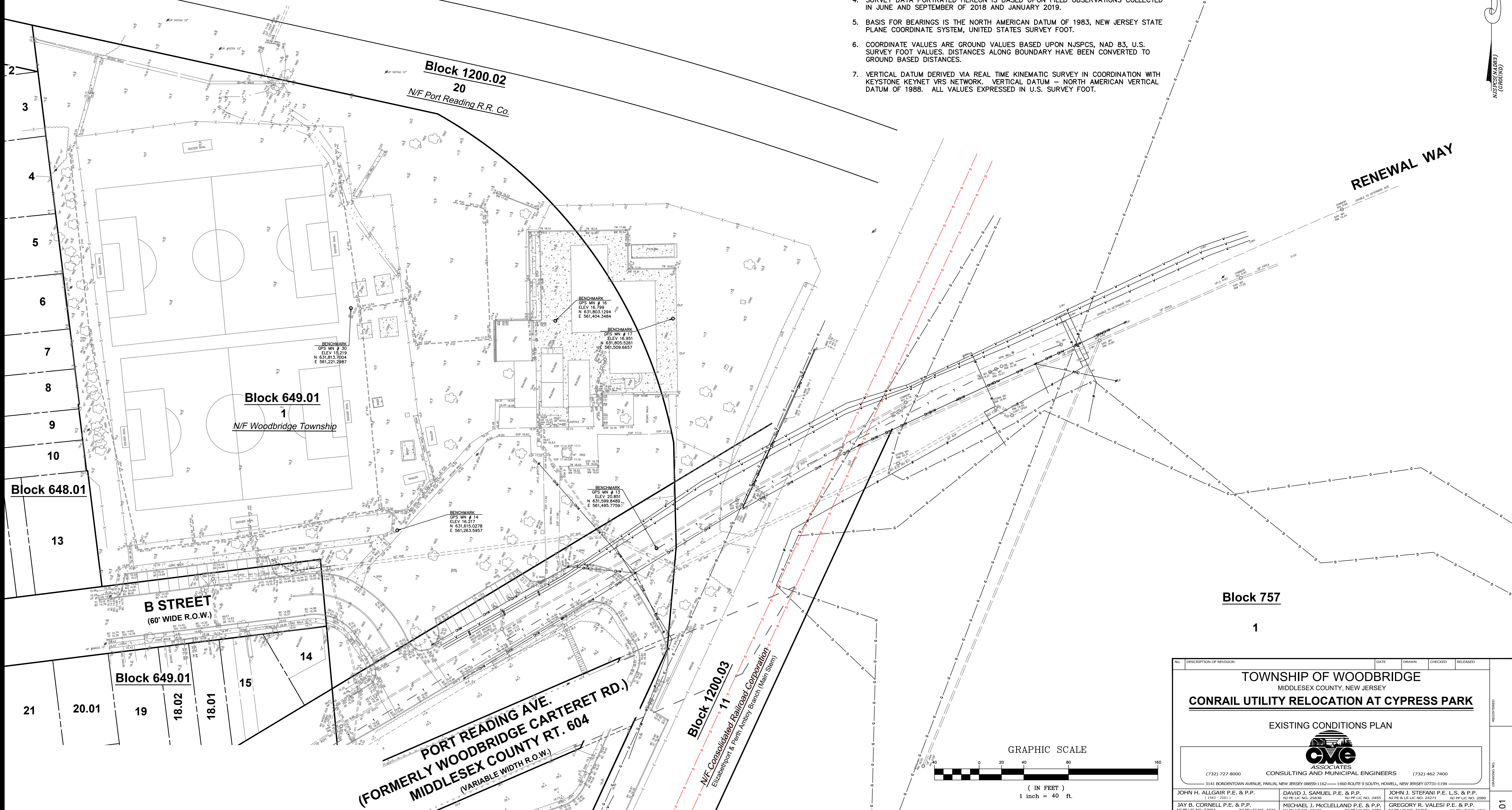
JOHN H. ALLGAIN P.E. & P.P. NJ PE LIC NO. 25838 (1987 - 2001)	DAVID J. SAMUEL P.E. & P.P. NJ PE LIC NO. 24455 NJ PE LIC NO. 24271	JOHN J. STEFANI P.E., L.S. & P.P. NJ PE LIC NO. 2089
JAY B. CORNELL P.E. & P.P. NJ PE LIC NO. 32962	MICHAEL J. MCCLELLAND P.E. & P.P. NJ PE LIC NO. 3874 NJ PE LIC NO. 34456	GREGORY R. VALESPI P.E. & P.P. NJ PE LIC NO. 3770

SCALE: As Shown  
DATE: April 2021  
DRAWN BY: PB  
DESIGNED BY: PB  
CHECKED BY: SHEET: 3 of 7

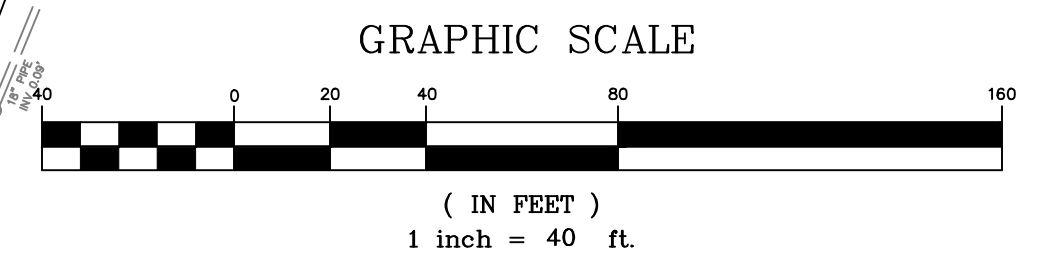
**MICHAEL J. MCCLELLAND P.E.**  
NEW JERSEY PROFESSIONAL ENGINEER LIC. 32468  
**NOT FOR CONSTRUCTION**

NOTES:

1. THIS SURVEYOR IS NOT QUALIFIED TO MAKE A DETERMINATION AS TO THE EXISTENCE OR NON-EXISTENCE OF ENVIRONMENTALLY UNSAFE CONDITIONS. THEREFORE, NO STATEMENT IS BEING MADE OR IMPLIED HEREON, NOR SHOULD IT BE ASSUMED OR CONSTRUED THAT ANY STATEMENT IS BEING MADE BY THE FACT THAT NO EVIDENCE OF ENVIRONMENTALLY UNSAFE CONDITIONS ARE PORTRAYED HEREON. THE CLIENT SHOULD PURSUE THESE MATTERS SEPARATE AND APART FROM THIS SURVEY.
2. THIS SURVEYOR HAS NOT BEEN RETAINED TO MAKE ANY DETERMINATIONS AS TO THE EXISTENCE OR NON-EXISTENCE OF WETLANDS. THEREFORE, NO STATEMENT IS BEING MADE OR IMPLIED HEREON, NOR SHOULD IT BE ASSUMED OR CONSTRUED THAT ANY STATEMENT IS BEING MADE BY THE FACT THAT NO EVIDENCE OF WETLANDS IS PORTRAYED HEREON. THE CLIENT SHOULD PURSUE THIS MATTER SEPARATE AND APART FROM THIS SURVEY.
3. THIS SURVEYOR CONDUCTED NO UNDERGROUND EXPLORATIONS. THEREFORE, ONLY THOSE PHYSICAL FEATURES WHICH WERE PLAINLY VISIBLE AT THE TIME OF THIS SURVEY ARE PORTRAYED HEREON.
4. SURVEY DATA PORTRAYED HEREON IS BASED UPON FIELD OBSERVATIONS COLLECTED IN JUNE AND SEPTEMBER OF 2018 AND JANUARY 2019.
5. BASIS FOR BEARINGS IS THE NORTH AMERICAN DATUM OF 1983, NEW JERSEY STATE PLANE COORDINATE SYSTEM, UNITED STATES SURVEY FOOT.
6. COORDINATE VALUES ARE GROUND VALUES BASED UPON NJSPCS, NAD 83, U.S. SURVEY FOOT VALUES. DISTANCES ALONG BOUNDARY HAVE BEEN CONVERTED TO GROUND BASED DISTANCES.
7. VERTICAL DATUM DERIVED VIA REAL TIME KINEMATIC SURVEY IN COORDINATION WITH KEYSTONE KEYNET VRS NETWORK. VERTICAL DATUM - NORTH AMERICAN VERTICAL DATUM OF 1988. ALL VALUES EXPRESSED IN U.S. SURVEY FOOT.



**EXISTING UTILITY LOCATIONS:**  
 EXISTING UTILITY LOCATIONS ARE BASED UPON INFORMATION COLLECTED FROM VARIOUS SOURCES AND ARE NOT GUARANTEED AS TO ACCURACY. UNDERGROUND OBJECTS OR MATERIAL LOCATION, ELEVATION, OR TYPE ARE NOT WARRANTED TO BE APPROXIMATELY CORRECT; NOR CAN THEY BE ASSUMED TO BE THE ONLY SUBSURFACE OBJECTS OR MATERIAL PRESENT.



TOWNSHIP OF WOODBRIDGE MIDDLESEX COUNTY, NEW JERSEY		CONRAIL UTILITY RELOCATION AT CYPRESS PARK	
EXISTING CONDITIONS PLAN			
 <b>CME ASSOCIATES</b> CONSULTING AND MUNICIPAL ENGINEERS			
3141 BORDENTOWN AVENUE, PARLIN, NEW JERSEY 08859-1162 — 1460 ROUTE 9 SOUTH, HOWELL, NEW JERSEY 07731-1194		(732) 727 8000 (732) 462 7400	
JOHN H. ALLGAIER P.E. & P.P. NJ PE LIC NO. 25838 NJ PP LIC NO. 2455	DAVID J. SAMUEL P.E. & P.P. NJ PE LIC NO. 24538 NJ PP LIC NO. 2455	JOHN J. STEFANI P.E. L.S. & P.P. NJ PE & LS LIC NO. 24271 NJ PP LIC NO. 2089	GREGORY R. VALESI P.E. & P.P. NJ PE LIC NO. 24456 NJ PP LIC NO. 4361
JAY B. CORNELL P.E. & P.P. NJ PE LIC NO. 22962	MICHAEL J. MCCLELLAND P.E. & P.P. NJ PE LIC NO. 32468 NJ PP LIC NO. 32770	SCALE: As Shown DATE: April 2021	
<b>MICHAEL J. MCGURL P.L.S.</b> NEW JERSEY PROFESSIONAL LAND SURVEYOR LIC. 38338		DRAWN BY: PB DESIGNED BY: PB CHECKED BY: MJM SHEET: 4 of 7	
<b>NOT FOR CONSTRUCTION</b>			

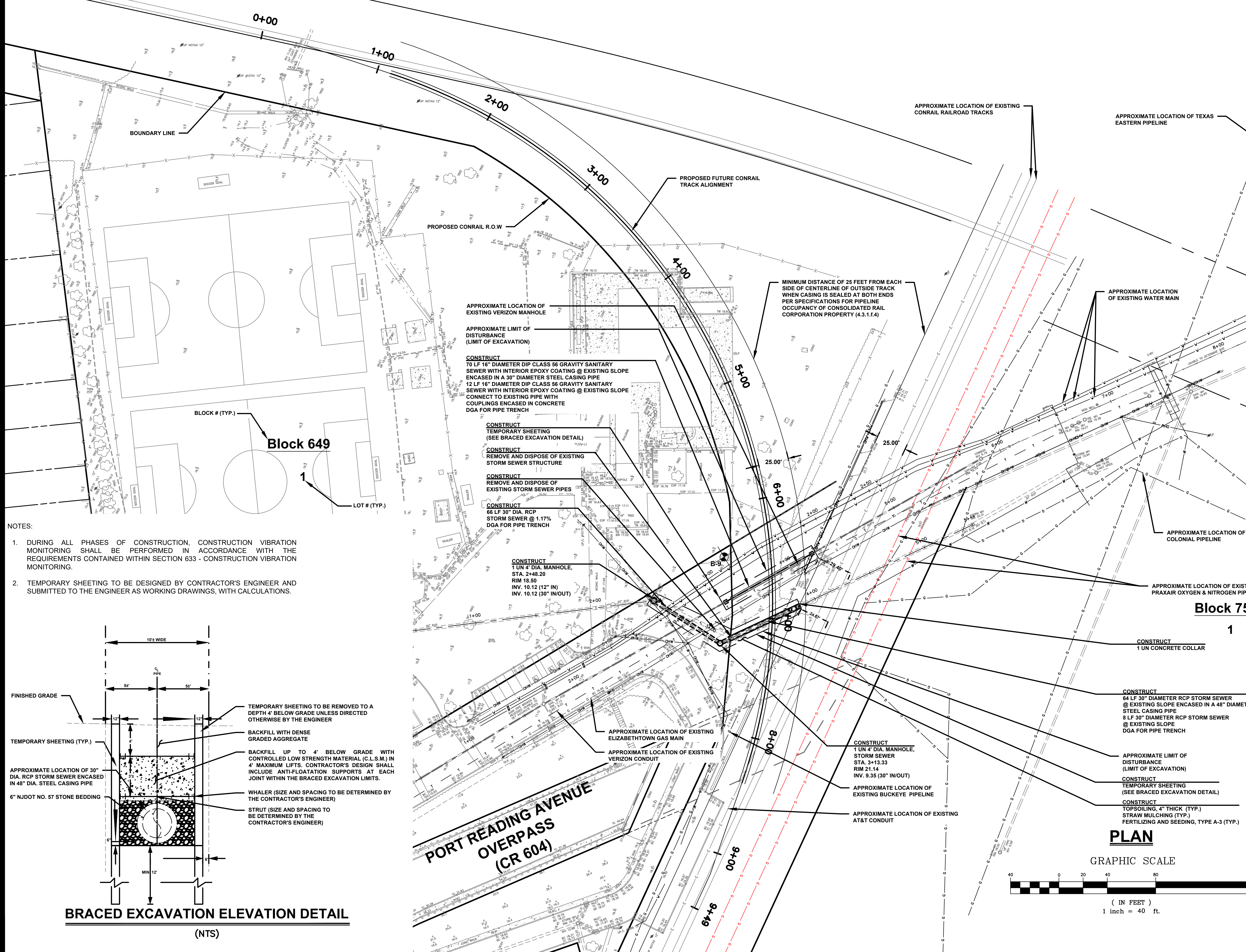
PWB0207.01

CONRAIL GENERAL NOTES:

1. CONTRACTOR SHALL FOLLOW ALL REQUIREMENTS OF CONRAIL'S CE-8 SPECIFICATION.
2. PIPELINE AND CROSSING TO BE INSTALLED AND MAINTAINED IN ACCORDANCE WITH LAST APPROVED AMERICAN RAILWAY ENGINEERING AND MAINTENANCE OF WAY ASSOCIATION SPECIFICATIONS FOR PIPELINES CONVEYING FLAMMABLE AND NON-FLAMMABLE SUBSTANCES.
3. BLASTING NOT PERMITTED.

CONSTRUCT

- 1 UN Remove and dispose of existing storm sewer structures
- 72 LF Remove and dispose of existing storm sewer pipes
- 120 CY Excavation, unclassified, test pit
- 9456 SF Temporary sheeting
- 74 LF 30" dia. RCP, Class V storm sewer
- 64 LF 30" dia. RCP, Class V storm sewer encased in 48" dia. steel casing pipe
- 1460 CY Dense graded aggregate for pipe trench
- 1 UN Concrete collar
- 2 UN 4" dia. manhole, storm sewer
- 12 LF 16" DIP class 56 gravity sanitary sewer
- 70 LF 16" DIP class 56 gravity sanitary sewer encased in 30" dia. steel casing pipe
- 2 UN Connect to existing sanitary sewer main
- 305 SY Topsoiling, 4" thick
- 305 SY Fertilizing and seeding, type A-3
- 305 SY Straw mulching



**TEMPORARY BYPASS SYSTEM:**  
 THE CONTRACTOR SHALL FURNISH AND INSTALL A TEMPORARY BYPASSING SYSTEM IN ORDER TO DIVERT THE FLOW UNDER OR AROUND THE EXISTING CONRAIL TRACKS. THE TEMPORARY BYPASS SYSTEM SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW AND SHALL INCLUDE LOCATIONS OF TEMPORARY PIPING, MANHOLE CONNECTIONS, ADDITIONAL STRUCTURES AND BYPASS PUMPS. MEASUREMENT AND PAYMENT FOR TEMPORARY BYPASS SYSTEM SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEMS REQUIRING SAME.

**SANITARY SEWER PIPE INSTALLATION:**  
 THE CONTRACTOR IS ADVISED THAT SANITARY SEWER PIPE INSTALLATION SHALL BE CONSTRUCTED USING OPEN CUT METHOD.

**EXISTING UTILITY LOCATIONS:**  
 THE CONTRACTOR IS ADVISED THAT THE UTILITY LOCATIONS INDICATED ON THE PLANS ARE APPROXIMATE. THE EXACT LOCATIONS AND DEPTHS WERE NOT AVAILABLE FROM THE UTILITY COMPANIES AT THE TIME THE PLANS WERE PREPARED. ACCORDINGLY, THE CONTRACTOR SHALL REQUEST A UTILITY MARKOUT FROM THE RESPECTIVE GAS AND WATER COMPANIES PRIOR TO COMMENCEMENT OF THE WORK.

**TEST PITS:**  
 THE CONTRACTOR SHALL CONSTRUCT TEST PITS IN ORDER TO VERIFY THE DEPTH AND LOCATION OF EXISTING UNDERGROUND UTILITIES WITHIN THE PROJECT LIMITS. THE CONTRACTOR SHALL COORDINATE WITH THE ENGINEER, TOWNSHIP, AND UTILITY COMPANIES PRIOR TO CONSTRUCTION IN ORDER TO DETERMINE THE LOCATION OF TEST PITS AND REQUIREMENTS DEEMED NECESSARY BY THE UTILITY COMPANIES.

**BUCKEYE TEST PITS:**  
 THE CONTRACTOR SHALL CONSTRUCT TEST PITS IN ORDER TO VERIFY THE DEPTH AND LOCATION OF THE EXISTING BUCKEYE PIPELINE AS SHOWN IN THE BUCKEYE TEST PIT LOCATION PLAN CONTAINED IN THE APPENDIX OF THE CONTRACT SPECIFICATIONS. THE CONTRACTOR IS DIRECTED TO THE BUCKEYE RIGHT-OF-WAY USE RESTRICTION SPECIFICATIONS CONTAINED IN THE APPENDIX OF THE CONTRACT SPECIFICATIONS REGARDING EXCAVATION IN THE VICINITY OF BUCKEYE FACILITIES.

**RAILROAD COORDINATION:**  
 THE CONTRACTOR IS ADVISED THAT WORKING WITHIN THE EXISTING CONRAIL RIGHT OF WAY WILL REQUIRE A RIGHT OF ENTRY PERMIT. ALL RIGHT OF ENTRY PERMIT REQUESTS MUST BE SUBMITTED TO THE CONRAIL CONTACT AS NOTED BELOW.  
 MARIA BOURASSA  
 MANAGER - ENGINEER CONTRACTS  
 CONSOLIDATED RAIL CORPORATION  
 330 FELLOWSHIP ROAD  
 MOUNT LAUREL, NJ 08054  
 PHONE: # (856) 231-2654  
 FAX # (856) 231-7193  
 EMAIL: MARIA.BOURASSA@CONRAIL.COM

**SPECIAL PROVISIONS:**  
 THE CONTRACTOR IS SPECIFICALLY DIRECTED TO THE REQUIREMENTS CONTAINED IN THE SPECIAL PROVISIONS SECTION OF THE CONTRACT SPECIFICATIONS.

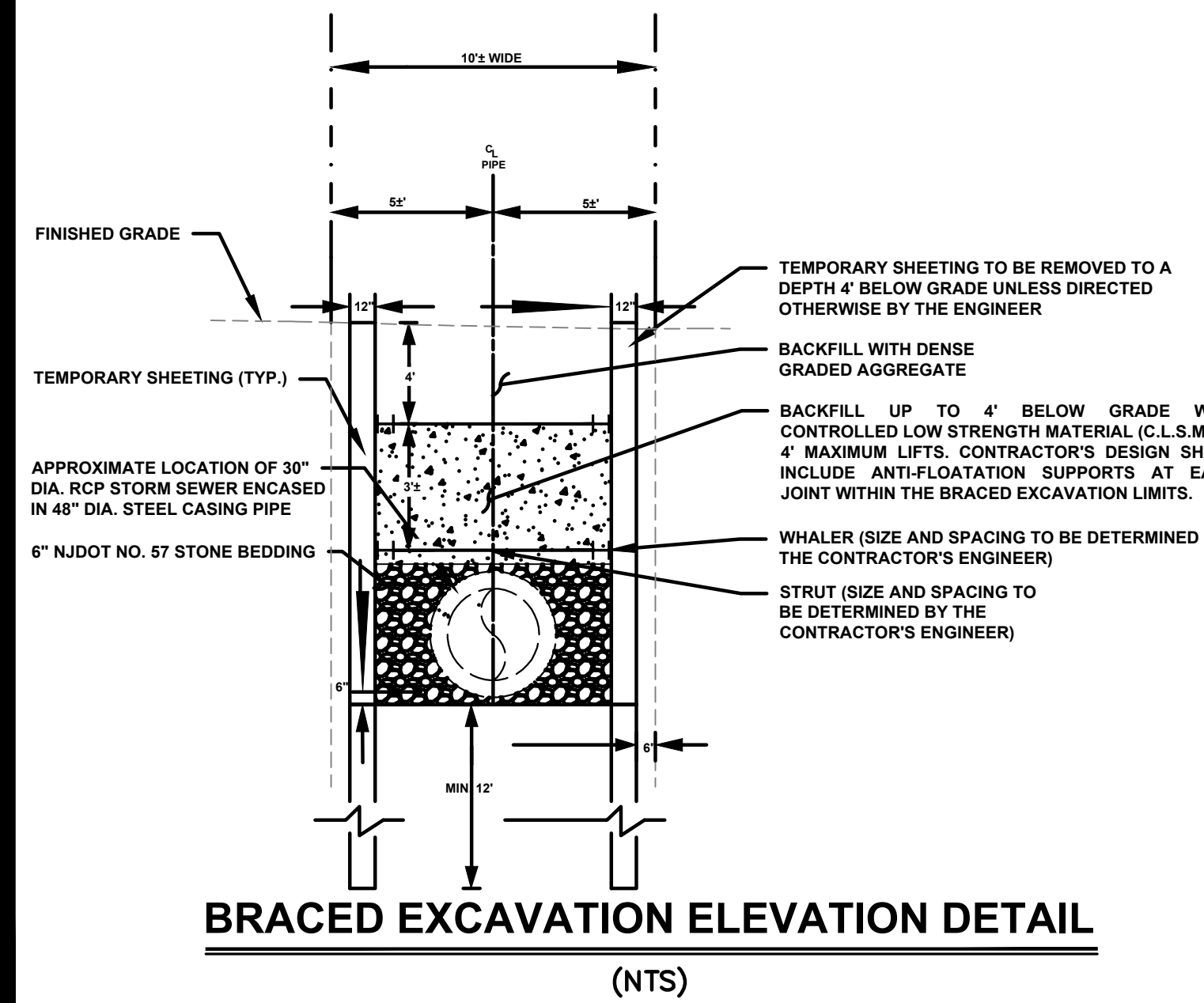
**NOTE:**  
 THE CONTRACTOR SHALL BE RESPONSIBLE FOR TRANSFERRING BENCHMARK PRIOR TO CONSTRUCTION. CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR MAINTAINING BENCHMARKS.

**NOTE:**  
 NOT ALL EXISTING UTILITIES ARE SHOWN ON THIS PLAN. THE CONTRACTOR IS RESPONSIBLE FOR REQUESTING MARKOUTS FOR ALL EXISTING UTILITIES.

**NOTE:**  
 THE CONTRACTOR IS REQUIRED TO VERIFY BENCHMARK INFORMATION PRIOR TO CONSTRUCTION.

NO.	DESCRIPTION OF REVISION	DATE	DRAWN	CHECKED	RELEASED
3.	REVISED FOR BID	2/23/2021	PB		
2.	ADDED BRACED EXCAVATION DETAIL	12/2/2020	PB		
1.	REVISED PER CONRAIL COMMENTS	9/21/2020	PB		

- NOTES:
1. DURING ALL PHASES OF CONSTRUCTION, CONSTRUCTION VIBRATION MONITORING SHALL BE PERFORMED IN ACCORDANCE WITH THE REQUIREMENTS CONTAINED WITHIN SECTION 633 - CONSTRUCTION VIBRATION MONITORING.
  2. TEMPORARY SHEETING TO BE DESIGNED BY CONTRACTOR'S ENGINEER AND SUBMITTED TO THE ENGINEER AS WORKING DRAWINGS, WITH CALCULATIONS.



**TOWNSHIP OF WOODBRIDGE**  
 MIDDLESEX COUNTY, NEW JERSEY  
**CONRAIL UTILITY RELOCATION AT CYPRESS PARK**

**CONSTRUCTION PLAN**

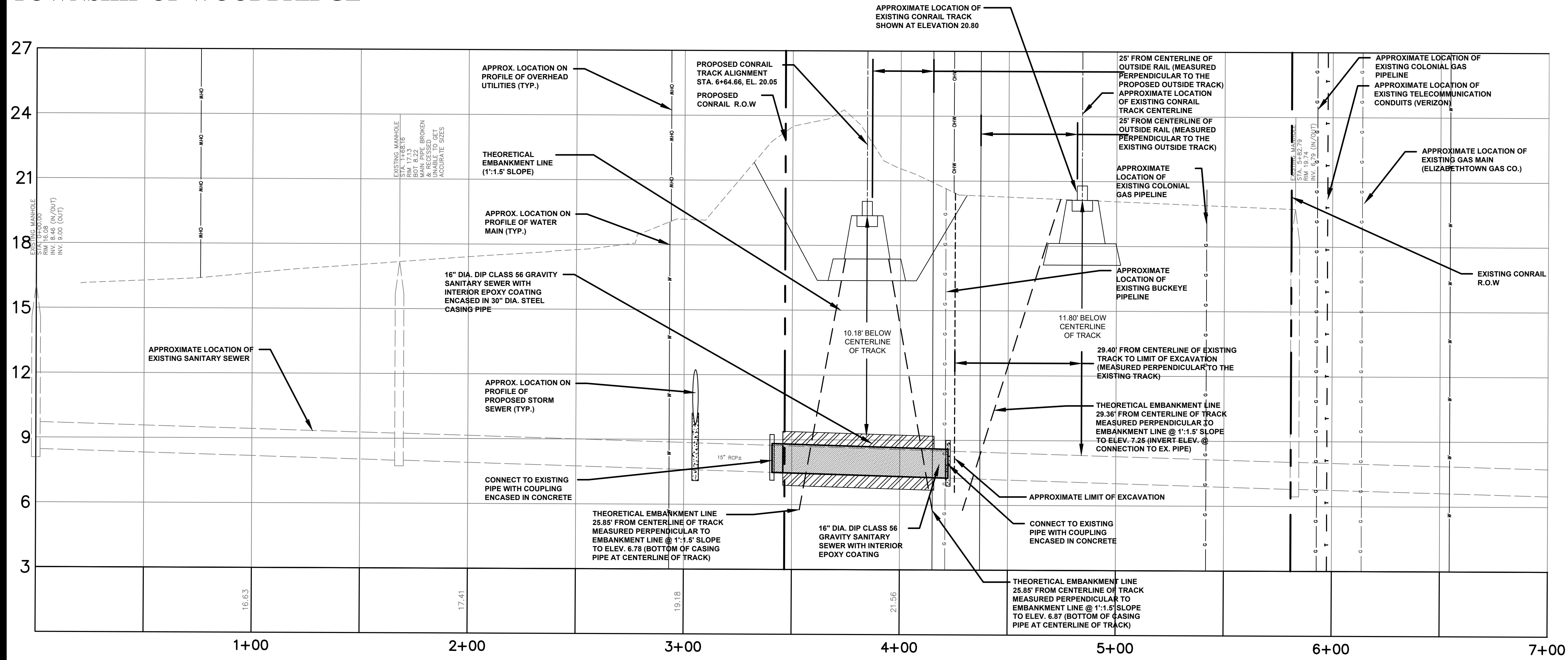
**CME ASSOCIATES**  
 CONSULTING AND MUNICIPAL ENGINEERS (732) 462 7400  
 3141 BORDENTOWN AVENUE, PARLIN, NEW JERSEY 08859-1162 — 1460 ROUTE 9 SOUTH, HOWELL, NEW JERSEY 07731-1194

JOHN H. ALLGAIER P.E. & P.P. 1933 - 2001 NJ PE LIC NO. 25038 NJ PP LIC NO. 2485	DAVID J. SAMUEL P.E. & P.P. NJ PE LIC NO. 25038 NJ PP LIC NO. 2485	JOHN J. STEFANI P.E., L.S. & P.P. NJ PE & LS LIC NO. 24271 NJ PP LIC NO. 2089
JAY B. CORNELL P.E. & P.P. NJ PE LIC NO. 20963	MICHAEL J. MCLELLAND P.E. & P.P. NJ PE LIC NO. 32468 NJ PP LIC NO. 32770	GREGORY R. VALESI P.E. & P.P. NJ PE LIC NO. 24458 NJ PP LIC NO. 4361

**MICHAEL J. MCLELLAND P.E.**  
 NEW JERSEY PROFESSIONAL ENGINEER LIC. 32468  
**NOT FOR CONSTRUCTION**

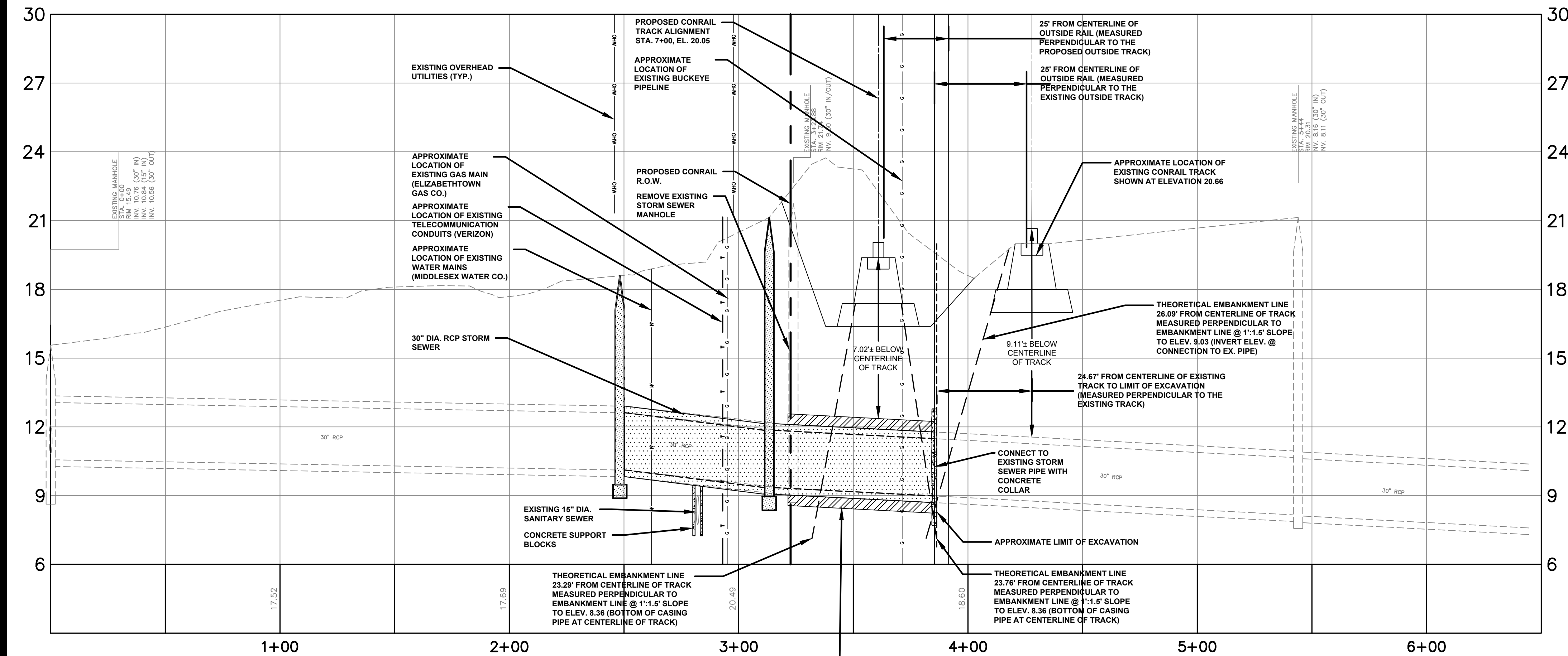
SCALE: As Shown DATE: April 2021  
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 CHECKED BY: SHEET: 5 of 7

PWB00207.01



**SANITARY SEWER PROFILE**

SCALE: 1"=30' (HORZ.)  
1"=3' (VERT.)



**STORM SEWER PROFILE**

SCALE: 1"=30' (HORZ.)  
1"=3' (VERT.)

**PROPOSED CONRAIL TRACK ELEVATIONS:**  
THE CONTRACTOR IS ADVISED THAT PROPOSED RAILROAD TRACK ELEVATIONS ARE BASED ON PLANS ENTITLED "TRACK PROFILES" AND "TRACK CROSS SECTION SHEETS" DATED FEBRUARY 2020, PREPARED BY JACOBS. SAME SHALL BE VERIFIED PRIOR TO CONSTRUCTION.

**EXISTING UTILITY LOCATIONS:**  
THE CONTRACTOR IS ADVISED THAT THE UTILITY LOCATIONS INDICATED ON THE PLANS ARE APPROXIMATE. THE EXACT LOCATIONS AND DEPTHS WERE NOT AVAILABLE FROM THE UTILITY COMPANIES AT THE TIME THE PLANS WERE PREPARED. ACCORDINGLY, THE CONTRACTOR SHALL REQUEST A UTILITY MARKOUT FROM THE RESPECTIVE GAS AND WATER COMPANIES PRIOR TO COMMENCEMENT OF THE WORK.


**TEST PITS:**  
THE CONTRACTOR SHALL CONSTRUCT TEST PITS IN ORDER TO VERIFY THE DEPTH AND LOCATION OF EXISTING UNDERGROUND UTILITIES WITHIN THE PROJECT LIMITS. THE CONTRACTOR SHALL COORDINATE WITH THE ENGINEER, TOWNSHIP, AND UTILITY COMPANIES PRIOR TO CONSTRUCTION IN ORDER TO DETERMINE THE LOCATION OF TEST PITS AND REQUIREMENTS DEEMED NECESSARY BY THE UTILITY COMPANIES.

2. REVISED FOR BID	2/23/2021	PB		
1. REVISED PER CONRAIL COMMENTS	9/21/2020	PB		
No.	DESCRIPTION OF REVISION	DATE	DRAWN	CHECKED

**TOWNSHIP OF WOODBRIDGE**  
MIDDLESEX COUNTY, NEW JERSEY

**CONRAIL UTILITY RELOCATION AT CYPRESS PARK**

**PIPE PROFILES**



3141 BORDENTOWN AVENUE, PARLIN, NEW JERSEY 08859-1162 — 1460 ROUTE 9 SOUTH, HOWELL, NEW JERSEY 07731-1194  
(732) 727-9000 CONSULTING AND MUNICIPAL ENGINEERS (732) 462-7400

JOHN H. ALLGAIER P.E. & P.P. 1993 - 2001 NJ REG. LIC. NO. 25038	DAVID J. SAMUEL P.E. & P.P. NJ REG. LIC. NO. 24855	JOHN J. STEFANI P.E., L.S. & P.P. NJ REG. LIC. NO. 24271
JAY B. CORNELL P.E. & P.P. NJ REG. LIC. NO. 32468	MICHAEL J. MCCLELLAND P.E. & P.P. NJ REG. LIC. NO. 32770	GREGORY R. VALESI P.E. & P.P. NJ REG. LIC. NO. 34456

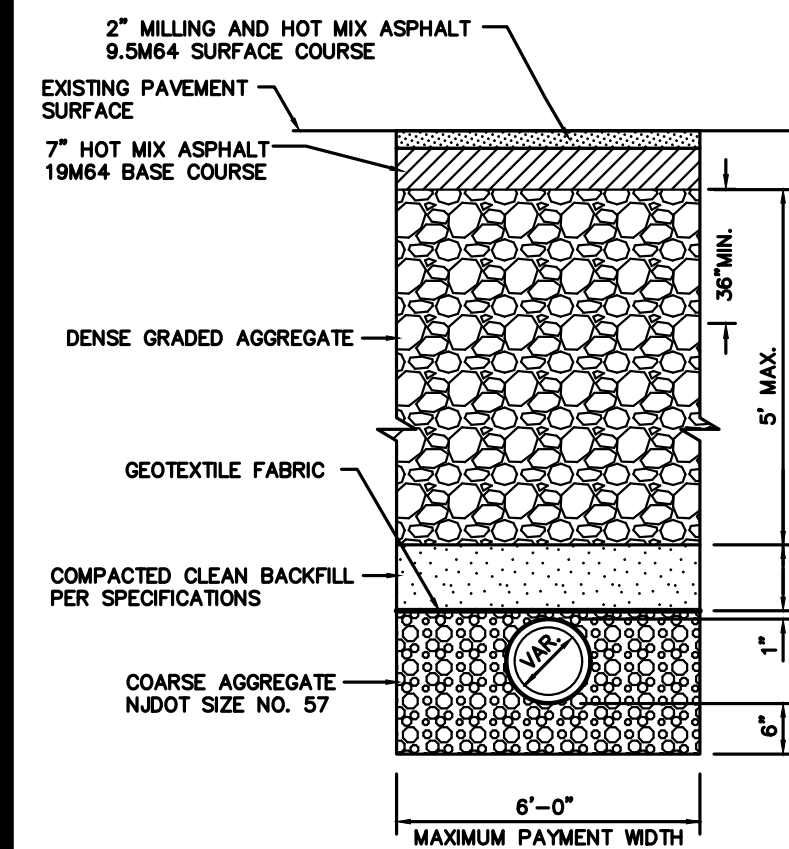
**MICHAEL J. MCCLELLAND P.E.**  
NEW JERSEY PROFESSIONAL ENGINEER LIC. 32468

SCALE: As Shown DATE: April 2021  
DRAWN BY: PB DESIGNED BY: PB  
CHECKED BY: PB SHEET: 6 of 7

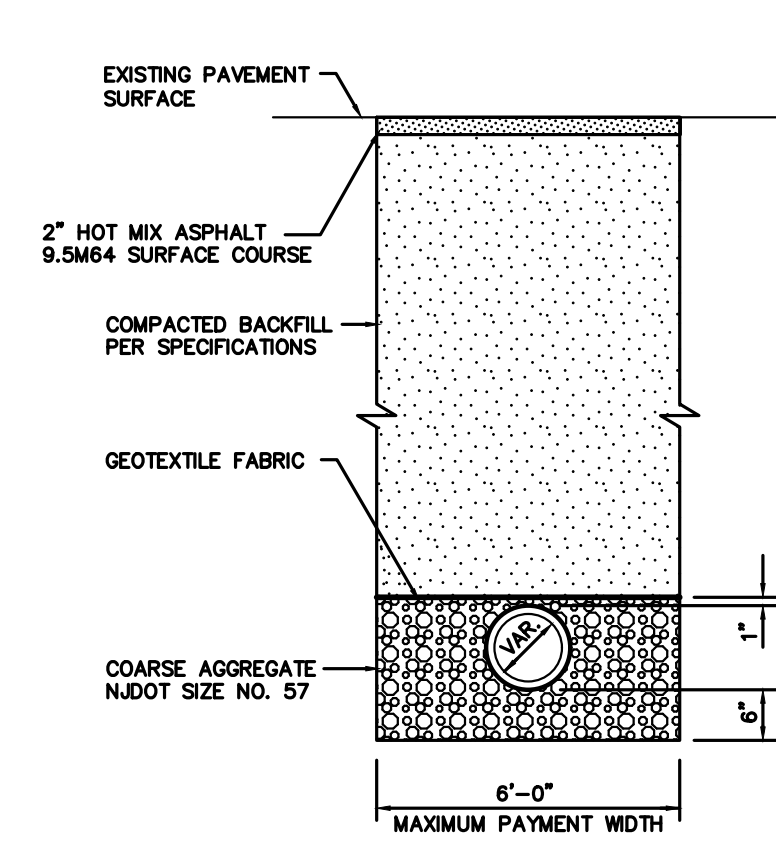
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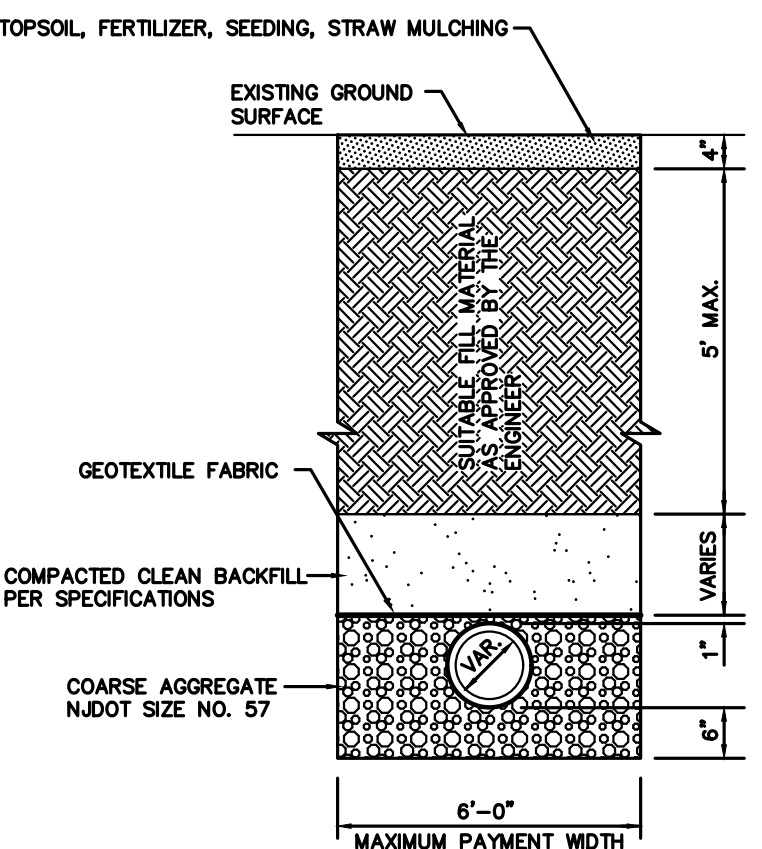
# TOWNSHIP OF WOODBRIDGE



**ROADWAY TRENCH REPAIR**  
N.T.S.

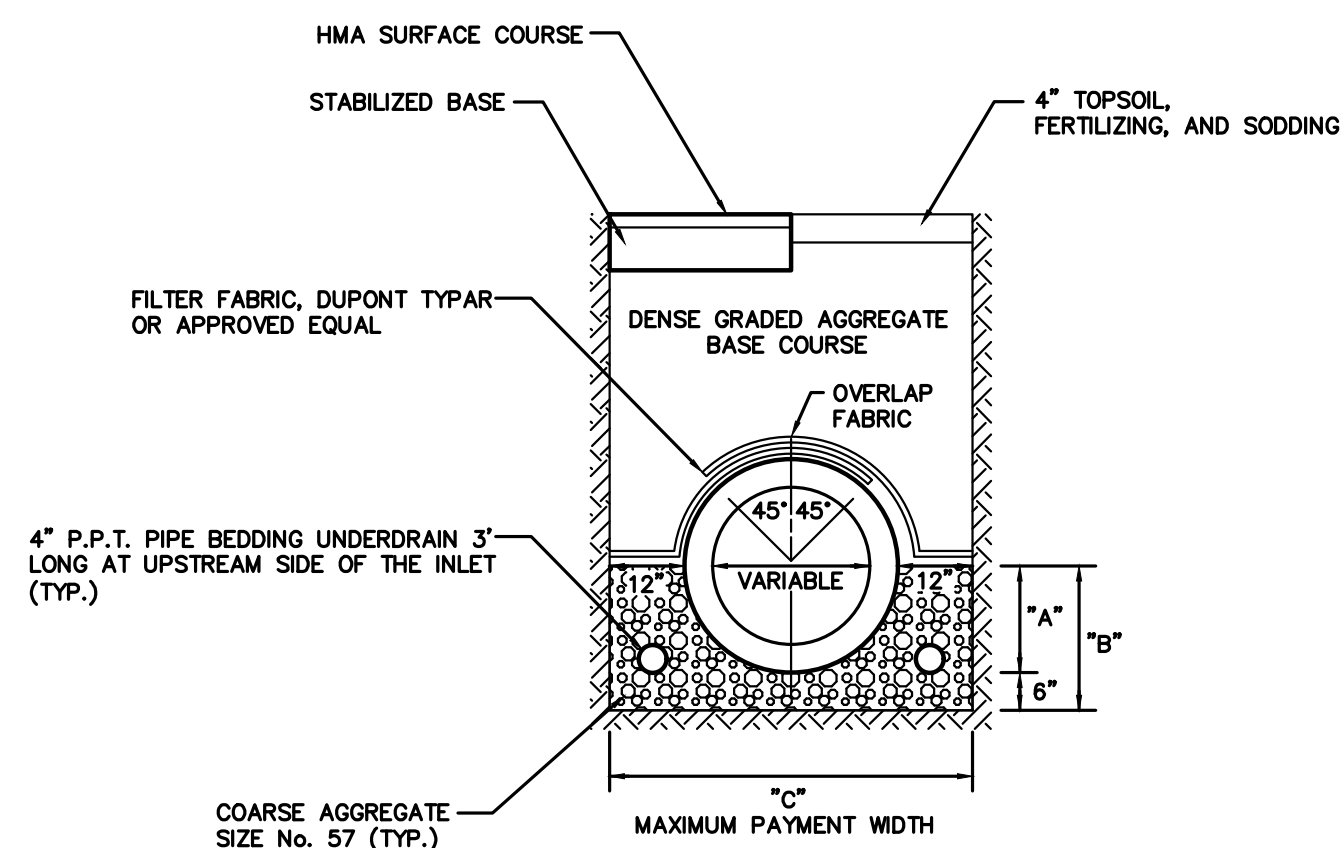


**TEMPORARY TRENCH REPAIR**  
N.T.S.



**UNPAVED TRENCH REPAIR**  
N.T.S.

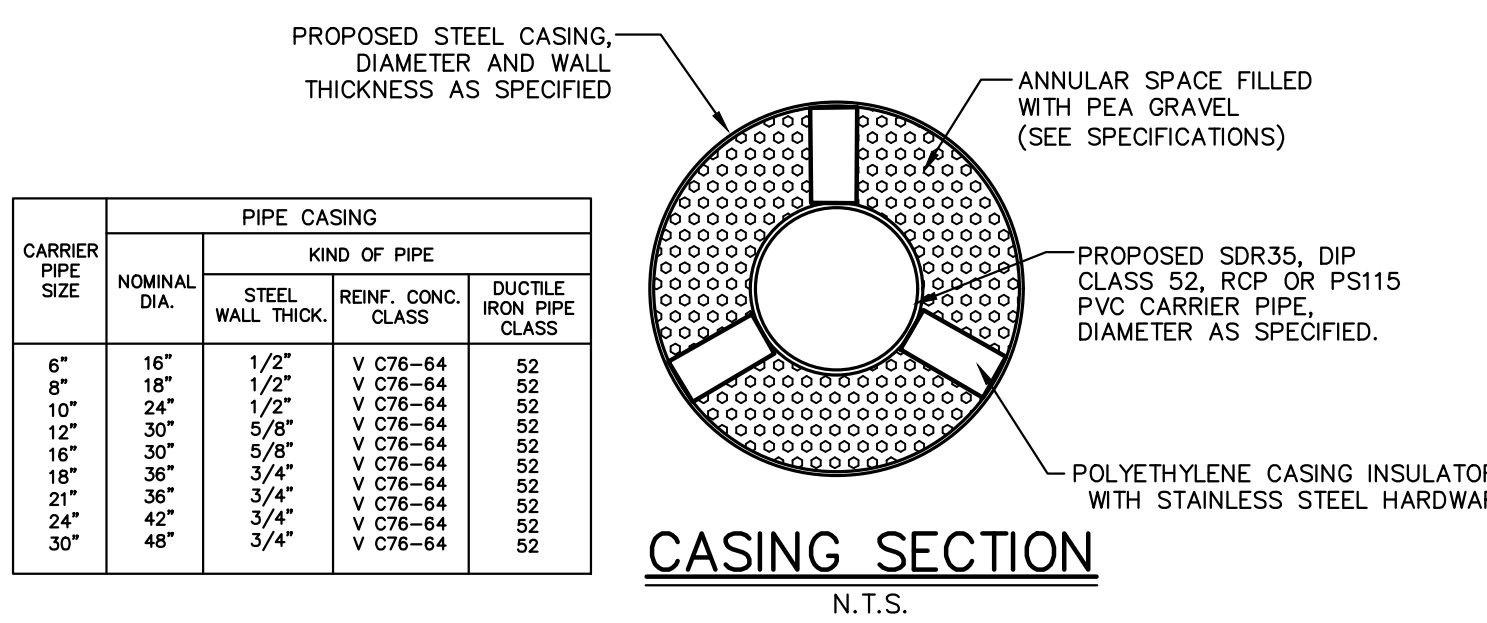
## TYPICAL BEDDING AND TRENCH DETAILS FOR SANITARY SEWER MAINS, CASING PIPES, AND/OR LATERALS



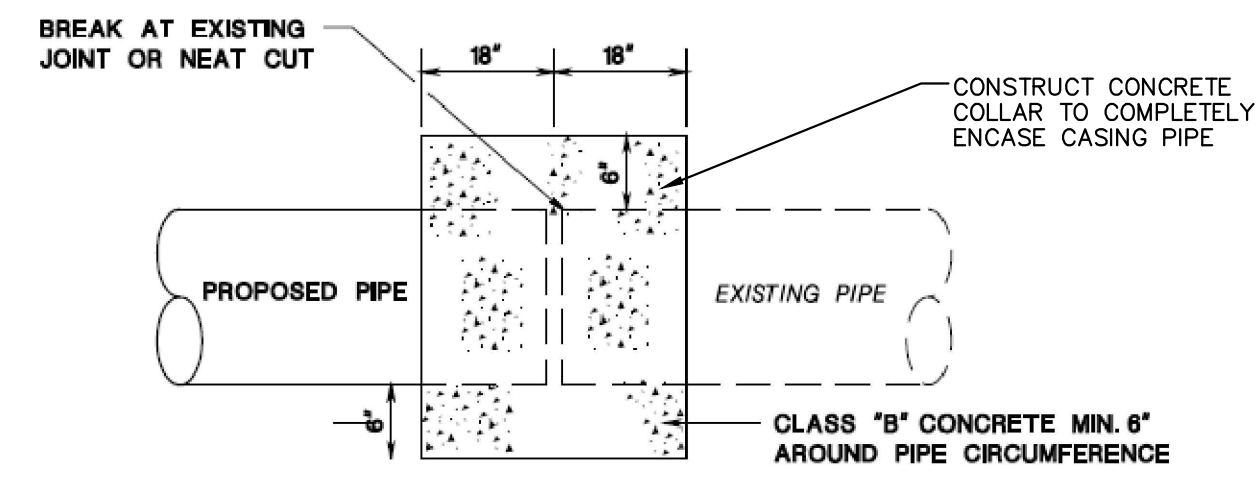
- NOTE:**
- UNDERDRAIN SHALL BE CONNECTED TO EACH DOWN STREAM DRAINAGE STRUCTURE AND SHALL BE CAPPED AT THE UPSTREAM END.
  - FLEXIBLE WATERTIGHT GASKETS SHALL BE USED IN CONCRETE PIPE AND SHALL BE INSTALLED IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE MANUFACTURER.

PIPE DIAMETER	"A"	"B"	"C"
12"	8"	14"	40"
15"	9 3/4"	15 1/2"	43 1/2"
18"	11 1/2"	17 1/2"	47"
24"	15"	21"	54"
30"	18 1/2"	24 1/2"	61"
36"	22"	28"	68"
42"	25 1/2"	31 1/2"	75"
48"	29"	35"	82"

## TYPICAL PIPE BEDDING STORM SEWER

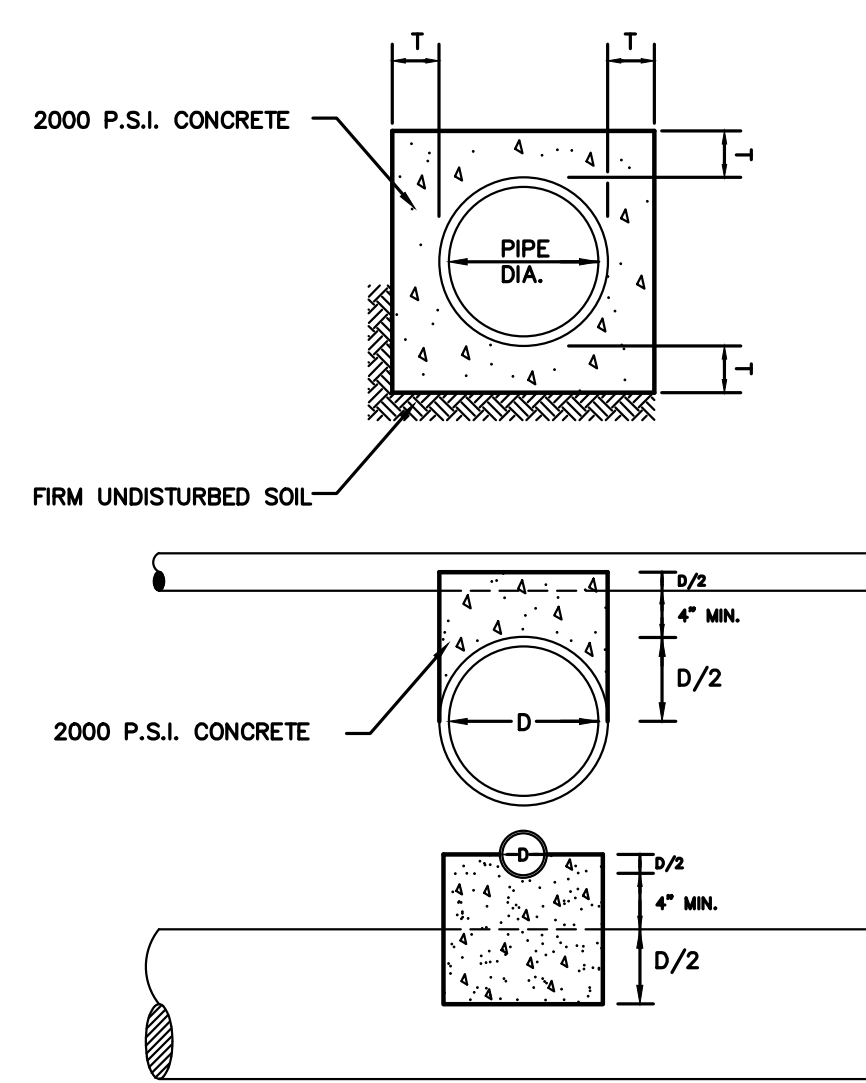


CARRIER PIPE SIZE	PIPE CASING		
	NOMINAL DIA.	STEEL WALL THICK.	KIND OF PIPE
6"	16"	1/2"	V C76-64
8"	18"	1/2"	V C76-64
10"	24"	1/2"	V C76-64
12"	30"	5/8"	V C76-64
16"	30"	5/8"	V C76-64
18"	36"	3/4"	V C76-64
21"	36"	3/4"	V C76-64
24"	42"	3/4"	V C76-64
30"	48"	3/4"	V C76-64

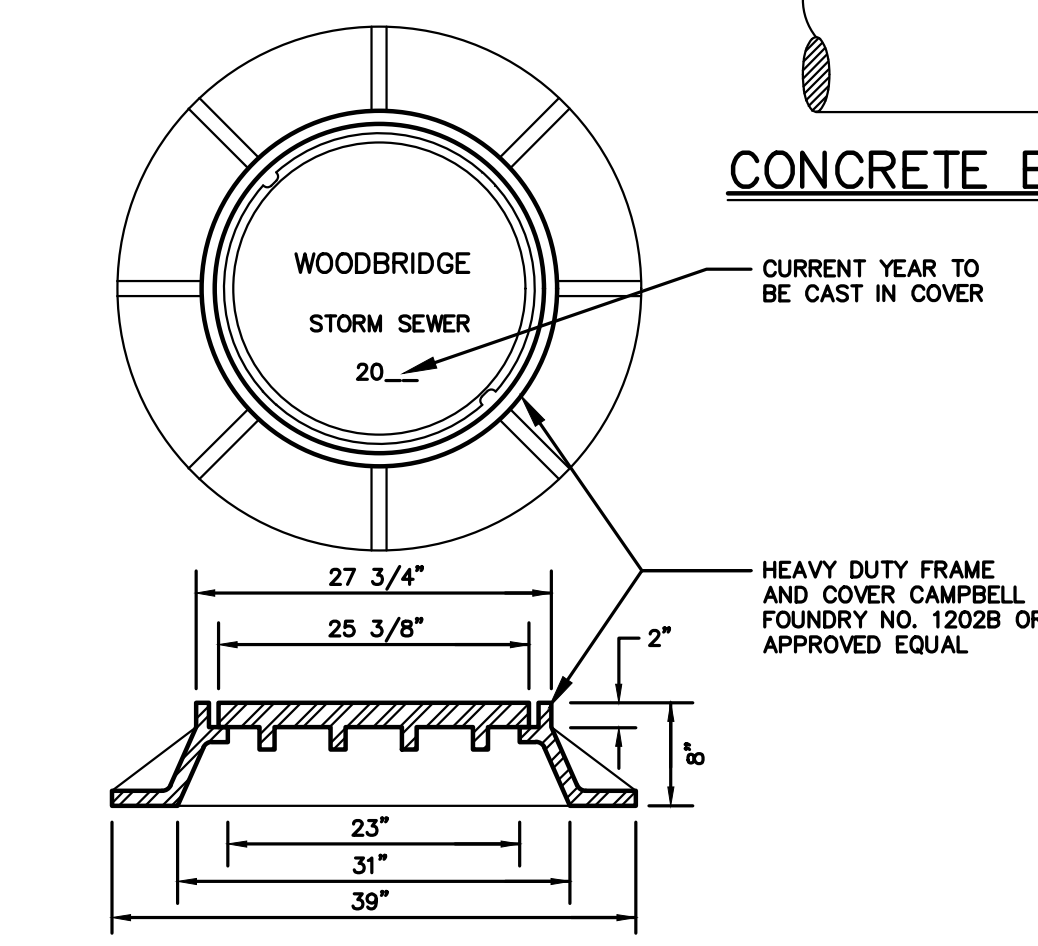


**CONCRETE COLLAR (FOR JOINING PROPOSED PIPE TO EXISTING PIPE)**  
CD-601-2.3

DIMENSIONS													
DIA.	6"	8"	10"	12"	15"	18"	21"	24"	27"	30"	36"	42"	
T	5"	5.5"	5.5"	6"	6"	6"	6"	6"	6"	7"	8"	9"	10"



**CONCRETE ENCASEMENT & CRADLE**  
N.T.S.

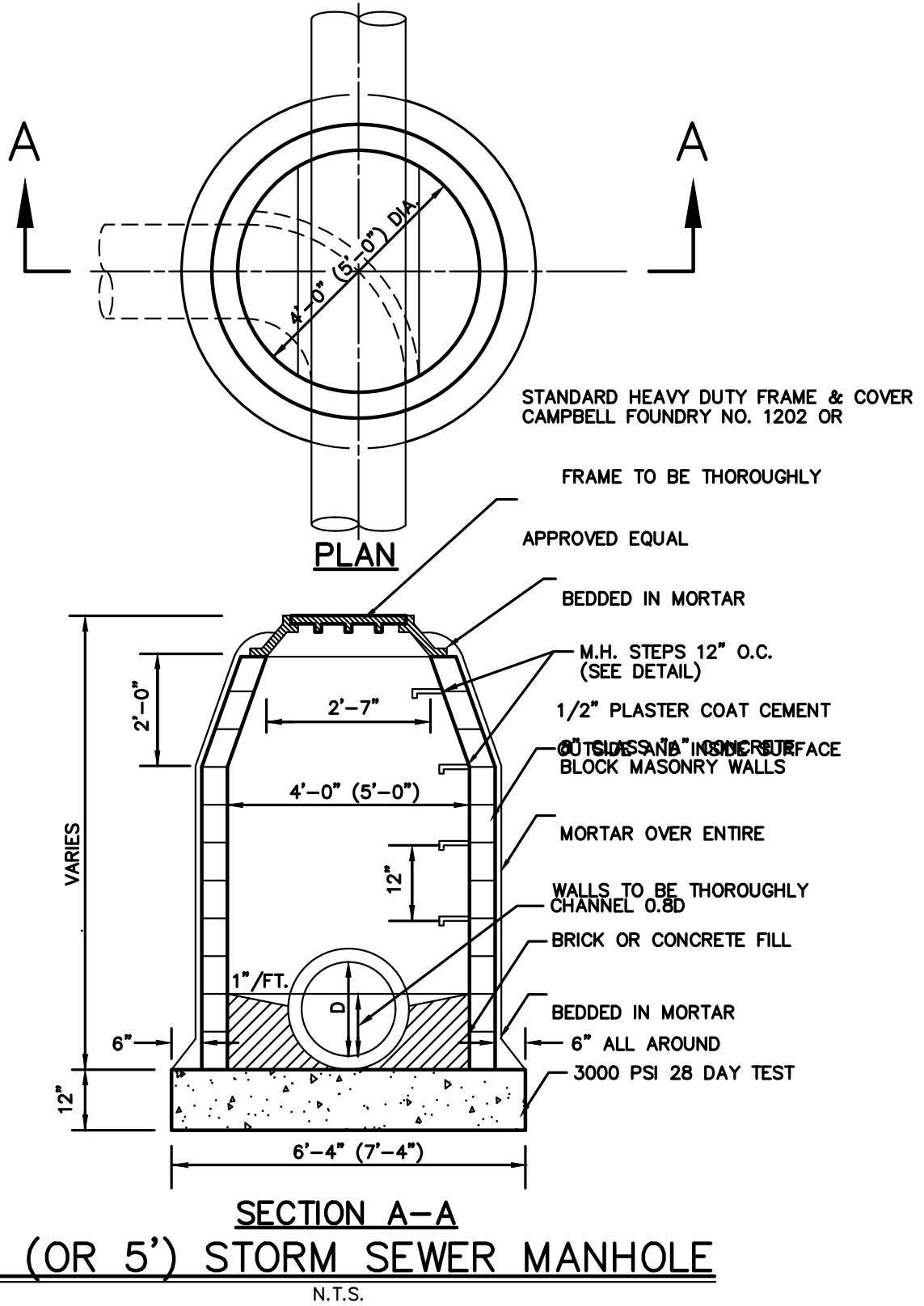


**TYPICAL STORM SEWER MANHOLE FRAME & COVER**  
N.T.S.

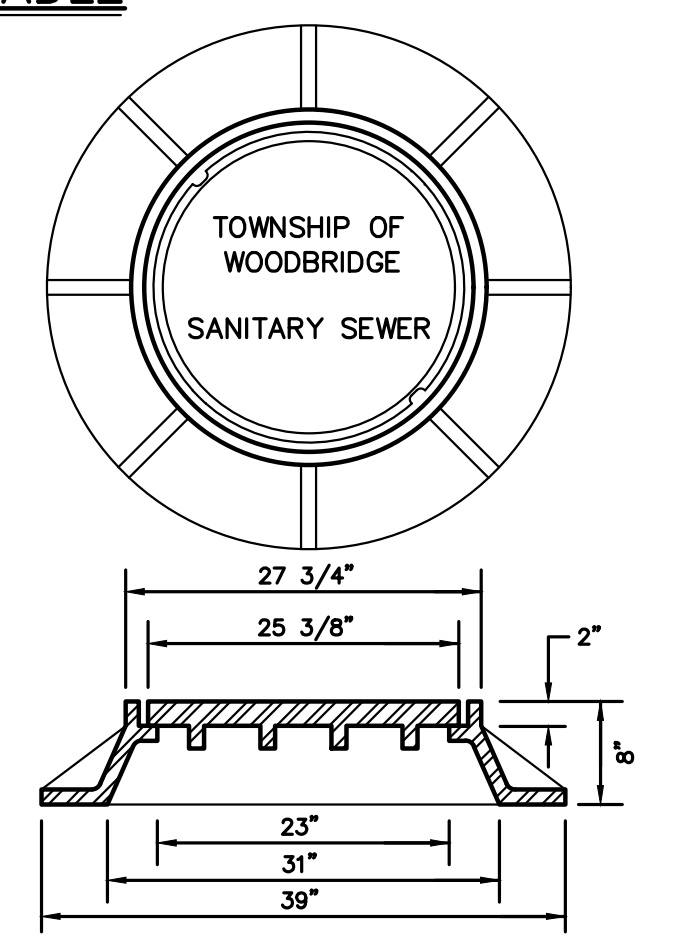
IF WATERTIGHT MANHOLE FRAMES & COVERS ARE REQUIRED THEY SHALL BE AS MFG. BY CAMPBELL FOUNDRY CO. PATTERN NO. 1503 OR APPROVED EQUAL.

THE MANHOLE COVER AND FRAME SHALL BE OF THE HEAVY HIGHWAY TYPE, WITH THE CIRCULAR FLARED TYPE FRAME AND ROUND FLANGE.

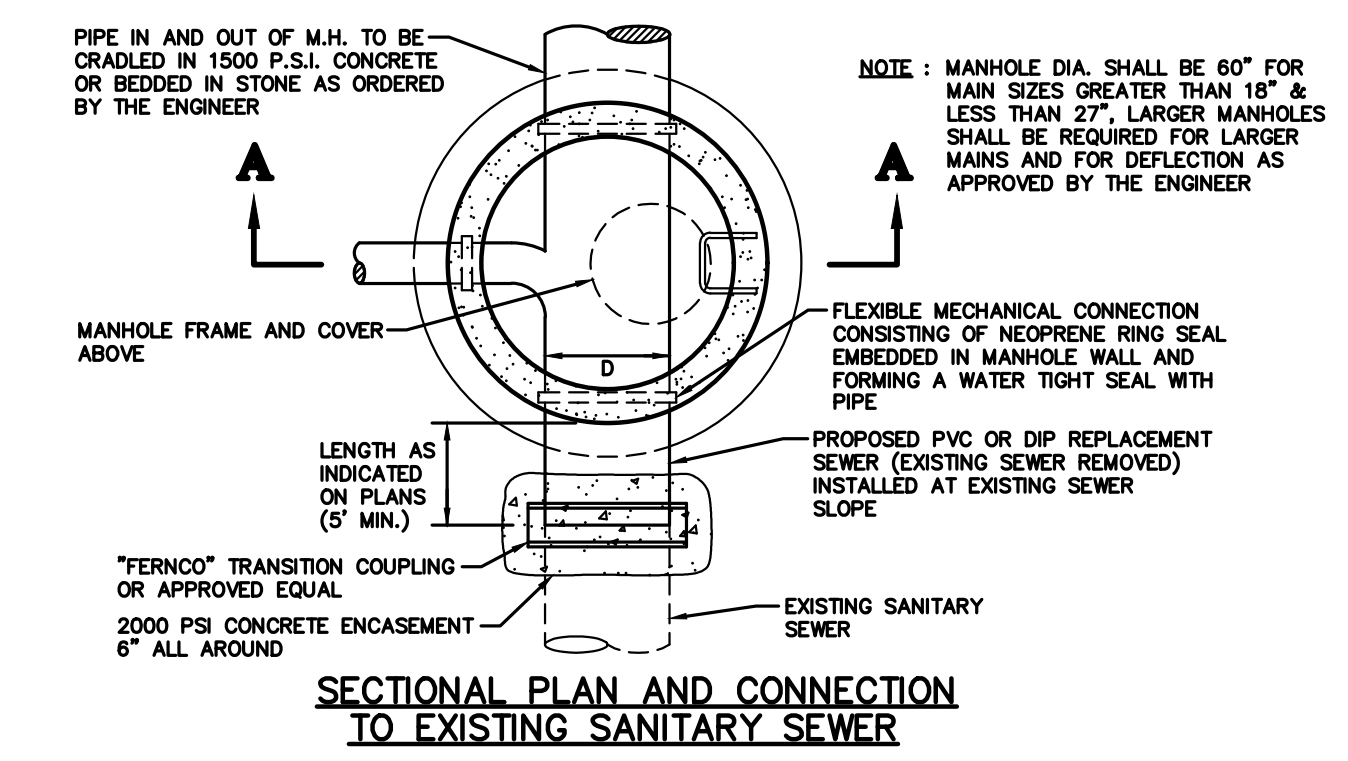
CAMPBELL FOUNDRY CO. PATTERN NO. 1202B OR ITS EQUIVALENT.



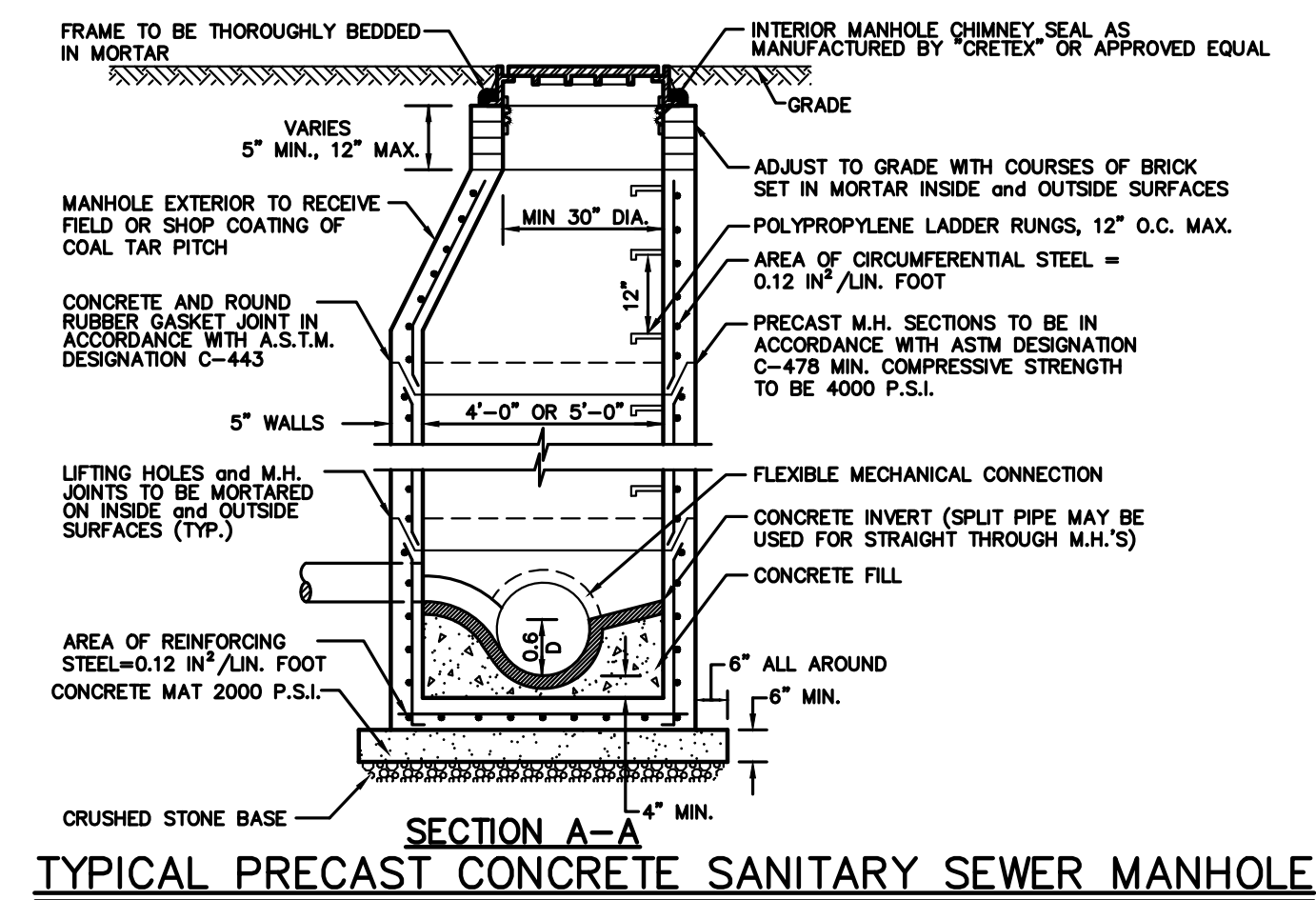
**SECTION A-A 4' (OR 5') STORM SEWER MANHOLE**  
N.T.S.



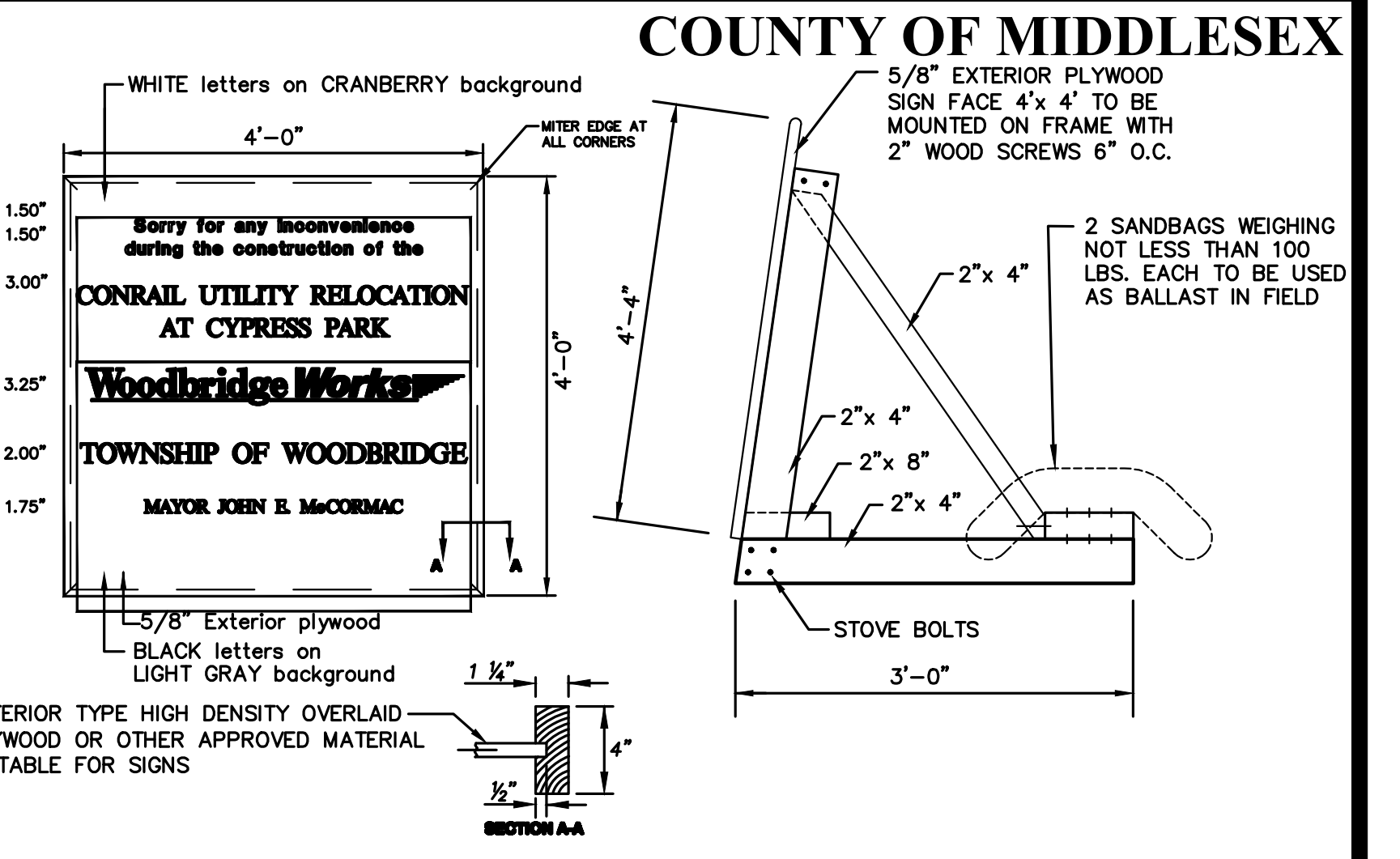
**TYPICAL SANITARY SEWER MANHOLE FRAME & COVER**  
N.T.S.



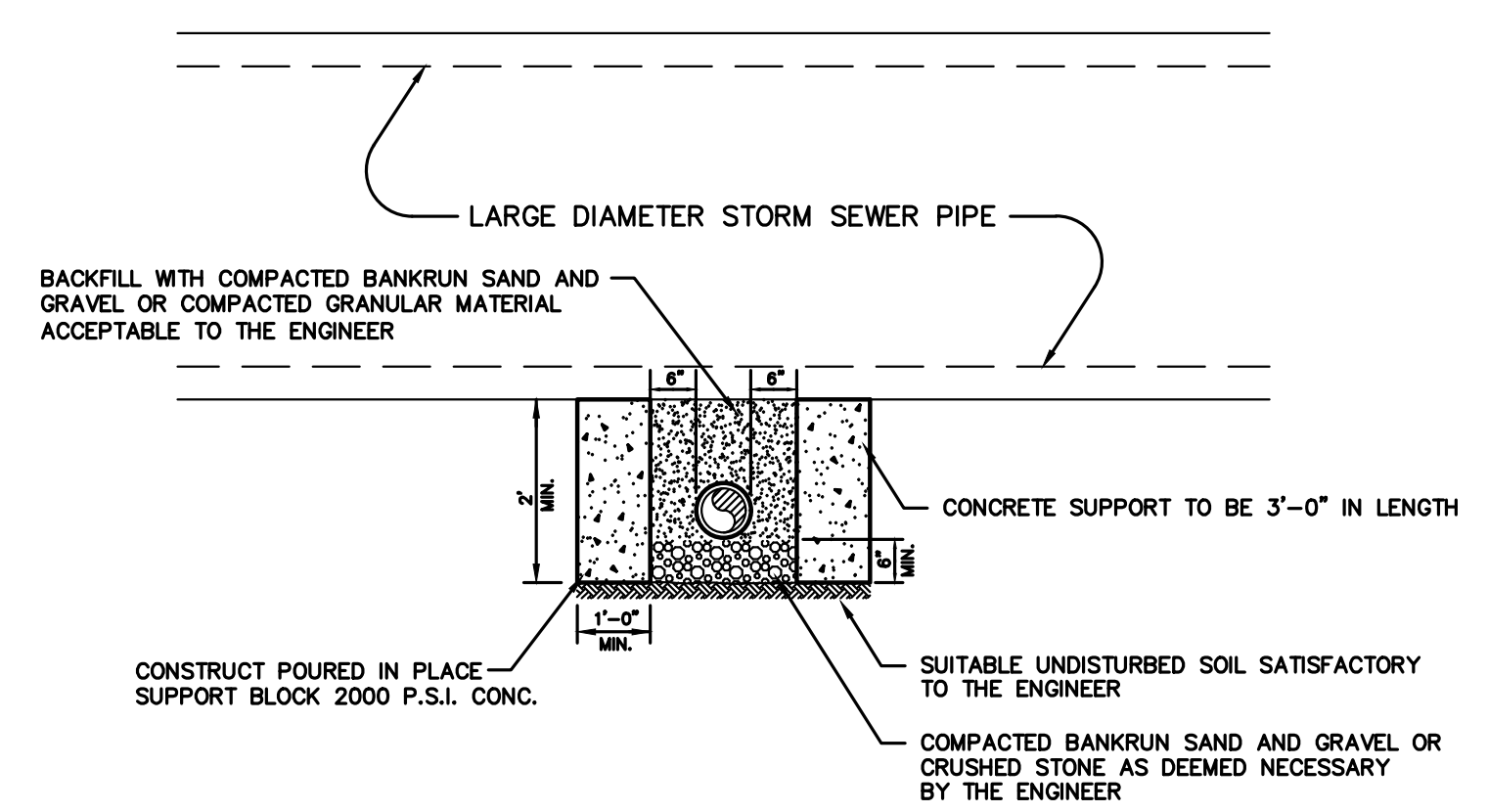
**SECTIONAL PLAN AND CONNECTION TO EXISTING SANITARY SEWER**



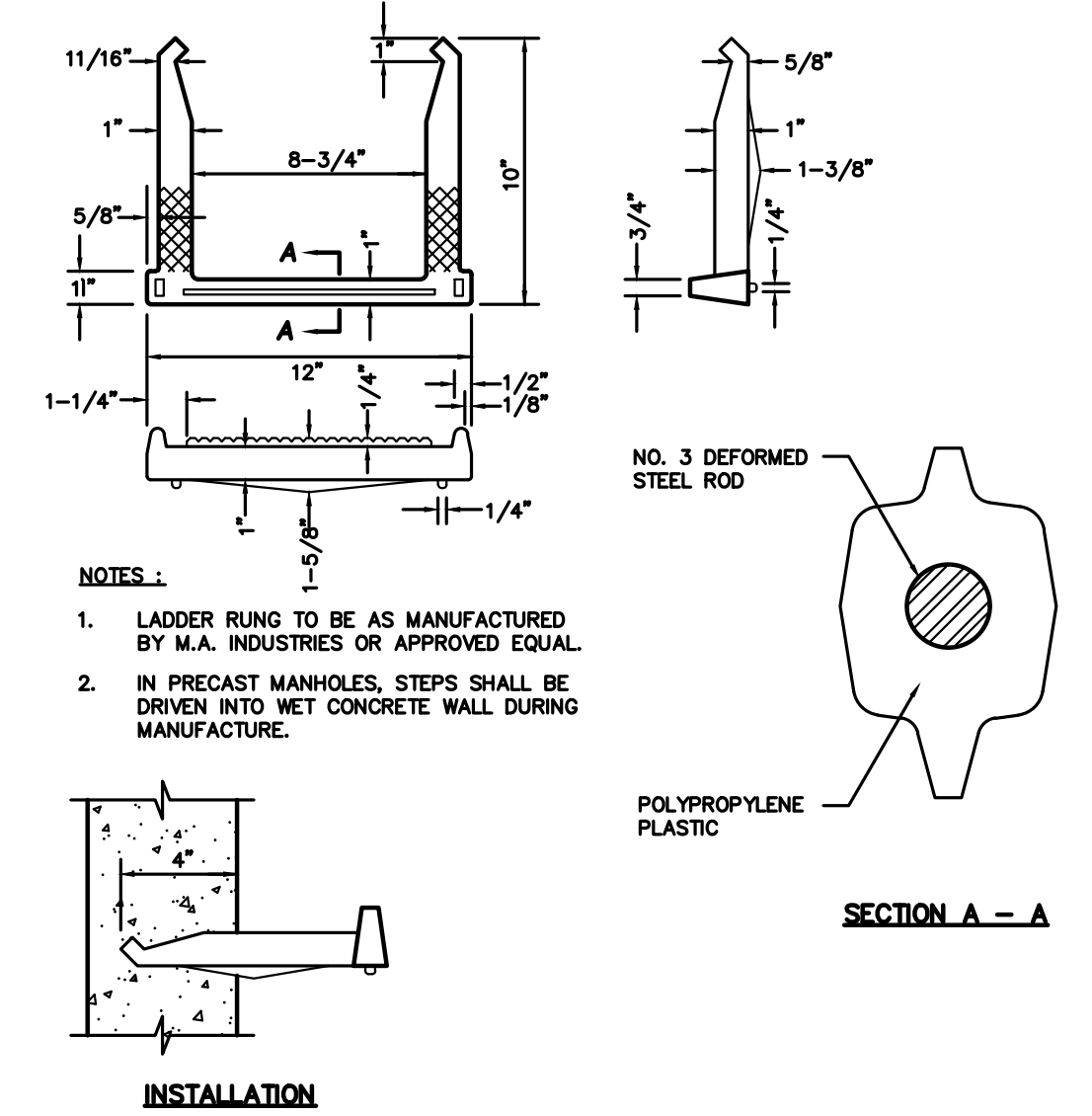
**SECTION A-A TYPICAL PRECAST CONCRETE SANITARY SEWER MANHOLE**  
N.T.S.



**PROJECT SIGN DETAIL**  
N.T.S.



**CONCRETE SUPPORT BLOCK DETAIL**  
N.T.S.



**POLYPROPYLENE LADDER RUNG DETAIL**  
N.T.S.

NO.	DESCRIPTION OF REVISION	DATE	DRAWN	CHECKED	RELEASED
<b>TOWNSHIP OF WOODBRIDGE</b> MIDDLESEX COUNTY, NEW JERSEY <b>CONRAIL UTILITY RELOCATION AT CYPRESS PARK</b> CONSTRUCTION DETAILS					
<b>ASSOCIATES</b> CONSULTING AND MUNICIPAL ENGINEERS 3141 BORDENTOWN AVENUE, PARLIN, NEW JERSEY 08859-1162 — 1460 ROUTE 9 SOUTH, HOWELL, NEW JERSEY 07731-1194 (732) 727-8000 (732) 462-7400					
JOHN H. ALLGAIER P.E. & P.P. NJ PE LIC. NO. 25838	DAVID J. SAMUEL P.E. & P.P. NJ PE LIC. NO. 24455	JOHN J. STEFANI P.E. L.S. & P.P. NJ PE & L.S. LIC. NO. 24273			
JAY B. CORNELL P.E. & P.P. NJ PE LIC. NO. 32046	MICHAEL J. MCLELLAND P.E. & P.P. NJ PE LIC. NO. 32468	GREGORY R. VALESI P.E. & P.P. NJ PE LIC. NO. 34456			
<b>MICHAEL J. MCLELLAND P.E.</b> NEW JERSEY PROFESSIONAL ENGINEER LIC. 32468					
<b>NOT FOR CONSTRUCTION</b>					
SCALE: As Shown DATE: April 2021 DRAWN BY: PB DESIGNED BY: PB CHECKED BY: SHEET: 7 of 7					

PWB00207.01