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1	COVER
2	GENERAL NOTES & QUANTITIES
3 - 6	EXISTING CONDITIONS PLAN
7 - 14	DIMENSION PLAN
15	SOIL EROSION & SEDIMENT CONTROL DETAILS
16 - 18	CONSTRUCTION DETAILS

The map displays the project location in the City of Chicago, centered on the intersection of Wall Street and Cranford Terrace. The project area is highlighted with a thick black outline. Surrounding streets include Hillside Avenue, Mendell Avenue, Crane Parkway, Collins Street, Wall Street, Cranford Terrace, Yarmouth Road, Catuga Road, Grant Street, Arthur Street, Hayes Street, and McClellan Street. A north arrow is located in the top right corner, and a scale bar indicating 1 inch = 300 feet is in the bottom right corner. The map also shows various other streets and landmarks, such as the Chicago River and the city grid.

NEW JERSEY DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS 2019
WITH AMENDMENTS THERETO SHALL GOVERN

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CONSULTING

 **811**

PROTECT YOURSELF
ALL STATES REQUIRE NOTIFICATION OF
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PREPARING TO "DISTURB THE EARTH'S
SURFACE ANYWHERE IN ANY STATE

Know what's **below.**
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SHEET NUMBER:
1 of 18

SURVEY NOTES:

1.

ALL EXISTING FEATURES DEPICTED ON THIS PLAN ARE BASED ON INFORMATION FROM THE SURVEY ENTITLED, "PARTIAL BOUNDARY AND TOPOGRAPHIC SURVEY FOR PORTION OF BLOCK 598, LOT 1, BLOCK 551, LOTS 10, 11 & 12, BLOCK 544, LOT 1 - CRANFORD TERRACE, MUNSEE DRIVE, EDWARD PLACE, PHILLIPS STREET, GARDEN PLACE" FOR THE TOWNSHIP OF CRANFORD, PREPARED BY COLLIER ENGINEERING & DESIGN, DATED 04/25/22, LAST REVISED 08/03/22.
2.

THE HORIZONTAL POSITION OF THIS SURVEY IS BASED ON GPS OBSERVATION AND IS RELATIVE TO NAD 1983 ADJUSTMENT.
3.

THE ELEVATIONS SHOWN HEREON ARE RELATIVE TO N.A.V.D. 1988 ADJUSTMENT

GENERAL NOTES:

1.

ALL MATERIALS, WORKMANSHIP, AND CONSTRUCTION RELATED TO THE PROPOSED IMPROVEMENTS SHOWN HEREIN SHALL BE IN ACCORDANCE WITH THE FOLLOWING, UNLESS SPECIFICALLY AMENDED OR SUPPLEMENTED BY CONTRACT DOCUMENTS:

A.

N.J. DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, 2019", AS CURRENTLY AMENDED;

B.

N.J. DEPARTMENT OF TRANSPORTATION "STANDARD ROADWAY CONSTRUCTION - TRAFFIC CONTROL - BRIDGE CONSTRUCTION DETAILS, 2016", AS CURRENTLY AMENDED;

C.

"MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES", AS CURRENTLY AMENDED;

D.

CURRENT PREVAILING MUNICIPAL, COUNTY AND/OR STATE AGENCY SPECIFICATIONS, STANDARDS, CONDITIONS AND REQUIREMENTS;

E.

CURRENT PREVAILING UTILITY COMPANY/AUTHORITY SPECIFICATIONS, STANDARDS, AND REQUIREMENTS;

F.

CURRENT MANUFACTURER'S SPECIFICATIONS, STANDARDS AND REQUIREMENTS;
2.

THE CONTRACTOR IS RESPONSIBLE FOR PROJECT SAFETY INCLUDING PROVISION OF ALL SAFETY DEVICES AND TRAINING REQUIRED.
3.

THE CONTRACTOR IS RESPONSIBLE FOR EXAMINING THE PROJECT PLANS, SPECIFICATIONS, DETAILS, AND SITE. THE CONTRACTOR SHALL NOTIFY THE UNDERSIGNED PROFESSIONAL IMMEDIATELY IF ANY SITE CONDITIONS DIFFER MATERIALLY FROM THOSE REPRESENTED HEREIN.
4.

THE CONTRACTOR SHALL OBTAIN PERMITS REQUIRED FOR THE PROPOSED IMPROVEMENTS.
5.

ALL MATERIALS MUST BE AMERICAN MADE. THE CONTRACTOR MUST PROVIDE THE ENGINEER WITH SHIPPING AND DELIVERY TICKETS/RECEIPTS FOR ALL MATERIALS TO USED FOR CONSTRUCTION OF THE PROPOSED IMPROVEMENTS.
6.

THE CONTRACTOR SHALL OBTAIN SHOP DRAWING APPROVAL PRIOR TO THE INSTALLATION OF EACH ITEM. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR REVIEW AND APPROVAL AT LEAST TWO (2) WEEKS PRIOR TO ORDERING MATERIALS.
7.

THE CONTRACTOR IS RESPONSIBLE FOR ALL STAKEOUT AND LAYOUT, AS NECESSARY, TO CONSTRUCT THE PROPOSED IMPROVEMENTS IN STRICT CONFORMANCE WITH THE PROJECT PLANS, SPECIFICATIONS AND DETAILS.
8.

ACTUAL FIELD LIMITS OF MILLING, PAVING, CURB AND SIDEWALK WORK WILL BE DETERMINED IN THE FIELD BY THE ENGINEER.
9.

NO "SIDE PROJECTS" FOR RESIDENTS, UTILITIES OR BUSINESS MAY BE CONSTRUCTED WITH MATERIAL PURCHASED FOR THE COMPLETION OF THE PROPOSED IMPROVEMENTS SHOWN HEREIN.
10.

THE CONTRACTOR MUST REVIEW AND AGREE TO AS-BUILT QUANTITIES WITH THE ENGINEER ON A WEEKLY BASIS.
11.

THE ENGINEER MUST BE CONTACTED IMMEDIATELY UPON THE CONTRACTOR RECEIVING A COMPLAINT FROM ANY PERSON WITHIN THE PROJECT AREA OR MUNICIPAL OFFICIAL.

UTILITY NOTES:

1.

UNDERGROUND UTILITIES WITHIN OFF-SITE STREETS AND FEATURES WERE MAPPED USING RADIO FREQUENCY PIPE AND CABLE LOCATORS (RFL) AND GROUND PENETRATING RADAR (GPR). OTHER BURIED UTILITIES MAY BE PRESENT BUT WERE NOT DETECTED DUE TO LIMITATIONS OF THE RFL AND GPR SYSTEMS, UNFAVORABLE SOIL CONDITIONS, SITE ACCESS, AND/OR DENSE UTILITY INFRASTRUCTURE; THEREFORE, 100% DETECTION IS NOT GUARANTEED. CAUTION SHOULD BE USED WHEN EXCAVATING IN THE VICINITY OF MAPPED FEATURES.
2.

POSITION OF GEOPHYSICAL FEATURES CANNOT BE GUARANTEED WITHOUT EXPOSURE.
3.

TARGETS WITH LATERAL EXTENTS OF LESS THAN 3 FEET AS OBSERVED IN GEOPHYSICAL DATA WERE NOT MAPPED.
4.

PLOTTED UTILITY POSITIONS AND DEPTHS REPRESENT LOCATION OF MOST APPROPRIATE INTERPRETED GEOPHYSICAL RESPONSE. THIS RESPONSE IS GENERALLY PRESENT OVER THE TOP CENTER OF THE TARGET BUT MAY BE LOCATED OFF-CENTER DEPENDING ON SIGNAL QUALITY AND THE EFFECTS OF LOCAL INTERFERENCE. FEATURE MAY BE WIDER THAN PLOTTED LINE (E.G. DUCT BANKS, LARGE CONDUIT).
5.

UTILITIES MAY BE INSTALLED WITHIN A DUCT BANK. DUE TO THE LIMITATIONS OF GEOPHYSICAL EQUIPMENT AND THE LOCATION OF FEATURES WITHIN THE DUCT BANK, THE ACTUAL HORIZONTAL AND VERTICAL DIMENSIONS OF THE DUCT BANK SYSTEM (AS OBSERVED IN GEOPHYSICAL DATA) MAY VARY.
6.

DUE TO LIMITATIONS OF GEOPHYSICAL METHODS, IT IS NOT ALWAYS POSSIBLE TO DISCRIMINATE BETWEEN UTILITIES AND OTHER BURIED FEATURES; THEREFORE IT IS POSSIBLE THAT SOME PLOTTED FEATURES MAY REPRESENT OBJECTS OTHER THAN UTILITIES.
7.

DUE TO VARYING SOIL CONDITIONS, POSSIBLE CHANGES IN UTILITY MATERIAL, AND OTHER FACTORS, SOME UNDERGROUND UTILITIES COULD NOT BE TRACED ENTIRELY WITHIN THE PROJECT LIMITS. THE UTILITY MAY CONTINUE, BUT SINCE IT WAS NOT OBSERVED IN THE GEOPHYSICAL DATA BEYOND THESE POINTS, IT COULD NOT BE MAPPED.
8.

DEPTHS SHOWN FOR UTILITIES ARE IN FEET BELOW EXISTING GROUND SURFACE AT TIME OF SURVEY. AS RFLS CANNOT PROVIDE RELIABLE DETH INFORMATION, DEPTHS ARE NOT PROVIDED FOR UTILITIES LOCATED WITH RFLS, BUT NOT DETECTED IN THE GPR DATA.
9.

DUE TO THE SITE SPECIFIC CONDITIONS, GPR SIGNAL PENETRATION DEPTH IS APPROXIMATELY 4 FEET. UTILITIES BELOW THIS DEPTH WERE NOT CONSISTENTLY DETECTED WITH GPR. THERE MAY BE OTHER UTILITIES PRESENT AT THE SITE BELOW THIS DEPTH THAT WERE NOT DETECTED AND THEREFORE ARE NOT PLOTTED ON THESE MAPS.
10.

ONLY THOSE AREAS DENOTED WITHIN THE PROJECT SITE LIMITS WERE INVESTIGATED WITH GEOPHYSICAL METHODS. NO CLAIMS TO UTILITY POSITION ARE MADE OUTSIDE OF THESE BOUNDARIES.
11.

SURFACE OBSTRUCTIONS SUCH AS UTILITY POLES AND HEAVY VEGETATION MAY HAVE LIMITED THE DATA COLLECTION AREA.
12.

CONTRACTOR IS RESPONSIBLE FOR CONTACTING ONE-CALL SERVICES AS REQUIRED BY STATE AND/OR LOCAL ORDINANCES PRIOR TO ANY EXCAVATION ACTIVITIES.
13.

NOT ALL UTILITY POLES, UTILITY VALVES AND UTILITY LINES ARE SHOWN ON THE PLAN. THE CONTRACTOR SHALL FIELD VERIFY ALL UTILITIES PRIOR TO THE START OF CONSTRUCTION.
14.

THE CONTRACTOR SHALL CALL FOR A UTILITY MARK-OUT PRIOR TO THE START OF CONSTRUCTION (CALL 1-800-272-1000).
15.

UTILITY RELOCATIONS SHOWN ON THE PLAN, IF ANY, ARE FOR INFORMATIONAL PURPOSES ONLY AND MAY NOT REPRESENT ALL REQUIRED WORK. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING WITH ALL UTILITY COMPANIES/AUTHORITIES IMPACTED BY THE PROPOSED WORK AND PERFORMING UTILITY RELOCATIONS IN ACCORDANCE WITH THE REQUIREMENTS OF THE PERTINENT UTILITY COMPANIES/AUTHORITIES. NO SEPARATE PAYMENT SHALL BE MADE FOR COORDINATING AND PERFORMING UTILITY RELOCATIONS.
16.

ALL UTILITY MANHOLES, VALVE BOXES, CLEANOUTS, METERS, ETC. SHALL BE RESET BY THE CONTRACTOR TO MEET PROPOSED ROAD, SIDEWALK AND DRIVEWAY GRADES. THE CONTRACTOR SHALL COORDINATE WITH IMPACTED UTILITY COMPANIES/AUTHORITIES AS NECESSARY.
17.

WATER VALVE BOXES GAS VALVE BOXES WITHIN THE ROADWAY SHALL BE RESET TO MEET PROPOSED GRADES.
18.

MISCELLANEOUS UTILITY EQUIPMENT WITHIN THE DRIVEWAYS SHALL BE RESET TO MEET PROPOSED GRADES DURING THE PROGRESS OF CURB, SIDEWALK AND DRIVEWAY CONSTRUCTION; NO SEPARATE PAYMENT SHALL BE MADE FOR THE RESETTING OF MISCELLANEOUS UTILITY EQUIPMENT, INCLUDING VALVE BOXES, CLEANOUTS, METERS, ETC. WITHIN SIDEWALK AND DRIVEWAY AREAS.
19.

THE CONTRACTOR SHALL TAKE PRECAUTION WHEN WORKING ADJACENT TO UTILITIES AND TEMPORARILY SUPPORT UTILITY POLES, IF REQUIRED, DURING THE PROGRESS OF WORK.
20.

THE CONTRACTOR SHALL CLEAN AND MAINTAIN ALL STORM SEWER STRUCTURES, AS NECESSARY, FOR THE DURATION OF THE PROJECT.

WORKING HOURS:

1.

THE CONTRACTOR SHALL WORK ON WEEKDAYS ONLY. APPROVAL TO WORK ON WEEKENDS MUST BE GRANTED BY THE LOCAL POLICE DEPARTMENT AND OWNER.
2.

THE CONTRACTOR SHALL NOT COMMENCE ANY CONSTRUCTION RELATED ACTIVITIES BEFORE 7 AM ON WEEKDAYS. ALL CONSTRUCTION RELATED ACTIVITIES MUST BE FINISHED AND THE SITE SHALL BE CLEANED AND SECURED BY 5 PM DAILY.

SIGNS, STRIPING AND MARKING NOTES:

1.

ALL SIGNAGE, TRAFFIC STRIPING AND PAVEMENT MARKINGS SHALL BE IN ACCORDANCE WITH THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (M.U.T.C.D.), AS CURRENTLY AMENDED.
2.

ALL EXISTING SIGNS SHALL BE RESET/RELOCATED WITH NEW POSTS. SIGNS SHALL BE RESET USING EXISTING SIGN BLADES WITH NEW SIGN POSTS PLACED IN SLEEVES. SLEEVES FOR NEW SIGN POSTS SHALL BE FILLED.

MILLING AND PAVING NOTES:

1.

THE CONTRACTOR MUST PROVIDE A SMOOTH SAWCUT EDGE WHERE PROPOSED PAVEMENT ABUTS EXISTING PAVEMENT.
2.

AFTER MILLING OPERATIONS AND PRIOR TO PAVING, THE CONTRACTOR MUST ALLOW ADEQUATE TIME FOR THE ENGINEER TO INSPECT THE MILLED SURFACE TO EVALUATE THE NEED FOR REPAIRS IN THE PAVEMENT BASE.
3.

IF REPAIRS IN THE PAVEMENT BASE ARE NECESSARY AS DETERMINED BY THE ENGINEER, THE CONTRACTOR SHALL NOT SCHEDULE OR COMMENCING PAVING OPERATIONS UNTIL SUCH TIME THAT ALL REPAIRS IN THE PAVEMENT BASE ARE COMPLETE.
4.

THE CONTRACTOR SHALL MARK ALL RAISED UTILITY MANHOLES, INLETS AND VALVE BOXES THAT ARE EXPOSED AS A RESULT OF MILLING. IN ADDITION, THE CONTRACTOR SHALL INSTALL TEMPORARY PAVEMENT RAMPS AROUND RAISED UTILITIES AS DIRECTED BY THE ENGINEER WHERE SUCH UTILITIES MAY BE IN CONFLICT WITH VEHICULAR AND PEDESTRIAN TRAFFIC.
5.

ALL JOINTS BETWEEN EXISTING AND PROPOSED ASPHALT SHALL BE SEALED WITHIN 48 HOURS OF PAVING.

MAINTENANCE AND PROTECTION OF TRAFFIC NOTES:

1.

THE CONTRACTOR SHALL COORDINATE ALL TRAFFIC CONTROL MEASURES WITH THE LOCAL POLICE DEPARTMENT AND OWNER. TRAFFIC CONTROL DETAILS PROVIDED HEREIN ARE TYPICAL AND SUBJECT TO MODIFICATION BY THE LOCAL POLICE DEPARTMENT AND OWNER.
2.

THE CONTRACTOR SHALL MAKE PROVISIONS FOR MATERIAL AND EQUIPMENT STORAGE. NO EQUIPMENT OR MATERIALS SHALL BE STORED WITHIN THE R.O.W. WITHOUT EXPRESS WRITTEN CONSENT FROM THE LOCAL POLICE DEPARTMENT AND OWNER.
3.

THE CONTRACTOR SHALL PREPARE AND SUBMIT A TRAFFIC CONTROL SCHEDULE AND STAGING PLAN TO THE LOCAL POLICE DEPARTMENT AND OWNER FOR REVIEW AND APPROVAL. THE PLAN MUST BE APPROVED BY THE LOCAL POLICE DEPARTMENT AND OWNER PRIOR TO THE START OF CONSTRUCTION.
4.

THE CONTRACTOR SHALL NOTIFY THE OWNER AND LOCAL POLICE DEPARTMENT SEVENTY-TWO (72) HOURS PRIOR TO THE START OF ANY WORK.
5.

THE CONTRACTOR SHALL COORDINATE WITH THE LOCAL POLICE DEPARTMENT TO DETERMINE THE NEED FOR POLICE TRAFFIC DIRECTORS. THE CONTRACTOR SHALL PROVIDE THE LOCAL POLICE DEPARTMENT WITHIN AT LEAST ONE (1) WEEK NOTICE PRIOR TO REQUESTING POLICE TRAFFIC DIRECTORS.
6.

THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING AND PLACING TEMPORARY NO PARKING SIGNS. SIGNS MUST BE OBTAINED FROM THE LOCAL POLICE DEPARTMENT. TEMPORARY NO PARKING SIGNS MUST BE POSTED AT LEAST FORTY-EIGHT (48) HOURS IN ADVANCE CONSTRUCTION.

SOIL EROSION AND TREE PROTECTION NOTES:

1.

THE CONTRACTOR SHALL INSTALL AND MAINTAIN SOIL EROSION AND SEDIMENT CONTROL MEASURES FOR THE DURATION OF THE PROJECT IN ACCORDANCE WITH THE STANDARDS FOR SOIL EROSION AND SEDIMENT CONTROL MEASURES IN NEW JERSEY.
2.

INLET FILTERS ARE TO BE INSTALLED ON ALL EXISTING AND NEW INLETS WITHIN THE PROJECT LIMITS AND IMMEDIATELY ADJACENT TO PROJECT LIMITS.
3.

SILT FENCE SHALL BE INSTALLED AS DIRECTED IN THE FIELD BY THE ENGINEER, AS NECESSARY.
4.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR IMPLEMENTING DUST CONTROL MEASURES, AS NECESSARY. ALL VEHICLES SHALL BE CLEAN AND ALL ROADWAYS SHALL BE MAINTAINED TO AVOID DUST POLLUTION.
5.

THE CONTRACTOR SHALL PROTECT ALL TREES SCHEDULED TO REMAIN DURING CONSTRUCTION. DAMAGE TO EXISTING TREES WILL BE EVALUATED BY THE OWNER AND ENGINEER. DAMAGED TREES WILL BE REPLACED AS REQUIRED AT NO ADDITIONAL COST TO THE OWNER.
6.

WHERE EXISTING TREES AND ROOT SYSTEMS MAY CONFLICT WITH THE PROPOSED IMPROVEMENTS, THE CONTRACTOR MUST RETAIN A CERTIFIED TREE EXPERT TO EVALUATE TREES IN QUESTION. ALL EVALUATIONS SHALL BE IN WRITING AND SHALL ACCURATELY IDENTIFY THE TREE IN QUESTION BY STATION AND OFFSET (LEFT OR RIGHT). ALL EVALUATIONS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW.
7.

TREES THAT ARE TO REMAIN, WHERE IT IS DETERMINED THAT ROOT CUTTING MAY SEVERELY DAMAGE THE TREE, SHALL HAVE A CURB BREAK AND STEEL CURB FACE PLATE INSTALLED AS DIRECTED BY THE ENGINEER.
8.

ALL EXCAVATED MATERIAL SHALL BE DISPOSED OF OFF-SITE. NO EXCAVATED MATERIAL SHALL BE STOCKPILED AND STORED WITHIN THE PROJECT LIMITS.

DEMOLITION AND CONSTRUCTION NOTES:

1.

ALL EXCAVATED MATERIALS ARE TO BE DISPOSED OF IN ACCORDANCE WITH APPROVED NJDOT AND NJDEP MEANS AND METHODS. THE CONTRACTOR MUST NOT DEPOSIT EXCESS MATERIALS WITHIN THE MUNICIPAL LIMITS WITHOUT EXPRESS PERMISSION OF THE OWNER.
2.

ALL EXCAVATED AND DEMOLISHED MATERIALS, DEBRIS, AND EQUIPMENT, INCLUDING STONE, TOPSOIL, TREES, BLOCK AND CONCRETE FORMS, MUST BE REMOVED FROM THE PROJECT AREA AT THE CONCLUSION OF EACH DAY, UNLESS OTHERWISE APPROVED BY THE ENGINEER AND LOCAL POLICE DEPARTMENT.
3.

THE CONTRACTOR SHALL NOTE THAT ROADWAY BASE MATERIAL MAY CONSIST OF COBBLESTONES, CONCRETE AND/OR ASPHALT. NO ADDITIONAL PAYMENTS WILL BE MADE TO CONTRACTOR FOR DAMAGES TO EQUIPMENT OR ADDITIONAL LABOR REQUIRED TO MAKE IMPROVEMENTS AS DESCRIBED ON PLANS DUE TO VARIATIONS IN ROADWAY BASE MATERIALS.
4.

ALL EXISTING GRATES AND CASTINGS ARE THE PROPERTY OF THE MUNICIPALITY OR RESPECTIVE UTILITY AUTHORITY. ALL EXISTING GRATES AND CASTINGS THAT ARE TO BE REPLACED AS A PART OF THE PROPOSED IMPROVEMENTS SHALL BE RETURNED TO THE MUNICIPALITY OR RESPECTIVE UTILITY AUTHORITY.
5.

THE CONTRACTOR MUST PROTECT CONCRETE UNTIL CONCRETE IS CURED. DAMAGED AND VANDALIZED CONCRETE SHALL BE REPLACED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.
6.

RECYCLED AGGREGATE (CONCRETE OR ASPHALT) MUST BE NJDOT APPROVED. CONTRACTOR MUST PROVIDE DOCUMENTATION FOR APPROVED MATERIAL PRIOR TO PLACEMENT.
7.

THE CONTRACTOR SHALL RESET ALL RAILINGS, GATES AND FENCES AS REQUIRED TO COMPLETE THE PROPOSED IMPROVEMENTS.
8.

THE CONTRACTOR IS RESPONSIBLE TO REPLACE/RESET ANY SPRINKLERS DAMAGED/DISTURBED DURING CONSTRUCTION AT NO ADDITIONAL COST TO THE OWNER.

ACCESS TO RESIDENCES AND BUSINESSES:

1.

THE CONTRACTOR SHALL MAINTAIN SAFE PEDESTRIAN AND VEHICULAR ACCESS TO ALL RESIDENCES AND BUSINESSES FOR THE DURATION OF THE PROJECT.
2.

DURING DEMOLITION AND IMMEDIATELY AFTER POURING CONCRETE, THE CONTRACTOR MUST PLACE WOOD PLANKS, AT LEAST TWO (2) FT. WIDE, AT EACH ADJACENT BUILDING ENTRANCE TO ALLOW FOR SAFE ACCESS. PEDESTRIANS CANNOT BE EXPECTED TO CROSS OVER STONE, DIRT OR OTHER DEMOLISHED MATERIAL WITHOUT PLANKS. THE CONTRACTOR WILL NOT BE PERMITTED TO LEAVE THE SITE WITHOUT PLACING WOODEN ACCESS PLANKS TO PROVIDE SAFE ACCESS TO RESIDENCES AND BUSINESSES.
3.

THE CONTRACTOR SHALL MAINTAIN VEHICULAR ACCESS TO ALL DRIVEWAYS DURING CONSTRUCTION. THE CONTRACTOR SHALL TEMPORARILY INSTALL AND MAINTAIN DENSE GRADED AGGREGATE OR HOT MIX ASPHALT TO PROVIDE A RIDING SURFACE FOR VEHICLE ACCESS TO EACH PROPERTY DURING CONSTRUCTION.
4.

THE CONTRACTOR MUST ASSURE ACCESS FOR EMERGENCY VEHICLES AND GARBAGE COLLECTION VENDORS FOR THE DURATION OF THE PROJECT.
5.

THE CONTRACTOR SHALL PROVIDE TEMPORARY ACCESSIBLE CURB RAMPS WITH HAND RAILS WHEN EXISTING ACCESSIBLE ACCESS IS REMOVED OR LIMITED DUE TO CONSTRUCTION.
6.

NO SEPARATE PAYMENT SHALL BE MADE FOR THE PROVISION OF SAFE PEDESTRIAN AND VEHICULAR ACCESS AS DESCRIBED ABOVE AND AS DIRECTED IN THE FIELD BY THE ENGINEER.

FINAL CLEAN UP AND PROJECT ACCEPTANCE:

1.

PRIOR TO FINAL ACCEPTANCE, ALL PROPERTY CORNERS OR MONUMENTS REMOVED OR DAMAGED DURING CONSTRUCTION SHALL BE REPLACED BY A NEW JERSEY LICENSED LAND SURVEYOR AT NO ADDITIONAL COST TO THE OWNER.
2.

THE CONTRACTOR MUST REPLACE ANY DAMAGED CONCRETE CURB AND SIDEWALK BEFORE ACCEPTANCE OF THE PROJECT BY THE OWNER.
3.

ALL AREAS OUTSIDE OF THE PROJECT LIMITS THAT ARE DISTURBED AS RESULT OF CONSTRUCTION ACTIVITIES SHALL BE RESTORED AT NO ADDITIONAL COST TO THE OWNER PRIOR TO PROJECT ACCEPTANCE.
4.

ALL GRASSED AREAS DISTURBED BY CONSTRUCTION ACTIVITIES SHALL BE RESTORED BY TOPSOILING, SEEDING, FERTILIZING AND MULCHING.

PAY ITEM NO.	BASE BID - DRAINAGE IMPROVEMENTS	UNIT	TOTAL BASE BID QUANTITY	IF/WHERE DIRECTED QUANTITY	PLAN SHEET QUANTITY
1	SOIL EROSION AND SEDIMENT CONTROL	LS	1	0	0
2	POLICE TRAFFIC DIRECTORS	MAN HOUR	480	480	0
3	TRAFFIC CONTROL MEASURES AND DEVICES	LS	1	0	0
4	ASPHALT PRICE ADJUSTMENT	DOLLAR	100	100	0
5	CLEARING SITE	LS	1	1	0
6	EXCAVATION, TEST PIT	CY	51	25	26
7	HOT MIX ASPHALT PAVEMENT REPAIR	SY	1,224	159	1,065
8	12" REINFORCED CONCRETE PIPE, CLASS V	LF	26	0	26
9	15" REINFORCED CONCRETE PIPE, CLASS V	LF	630	0	630
10	15" WATERTIGHT HIGH DENSITY POLYETHYLENE PIPE	LF	866	0	866
11	18" WATERTIGHT HIGH DENSITY POLYETHYLENE PIPE	LF	1,330	0	1,330
12	CONNECT EXISTING ROOF LEADER TO PROPOSED PIPE	UNIT	4	4	0
13	INLET, TYPE B	UNIT	3	0	3
14	INLET, TYPE E	UNIT	5	0	5
15	INLET, DOGHOUSE, TYPE DOUBLE E	UNIT	1	0	1
16	MANHOLE, 5' DIAMETER	UNIT	7	0	7
17	HOT MIX ASPHALT DRIVEWAY, 2" THICK	SY	42	42	0
18	9" X 18" CONCRETE VERTICAL CURB	LF	200	200	0
19	8" DUCTILE IRON PIPE, CLASS 52	LF	12	0	12
20	RECONNECT SANITARY SEWER LATERAL WITH NEW PIPE	UNIT	20	20	0
21	TOPSOIL SPREADING, 4" THICK	SY	70	50	20
22	FERTILIZING AND SEEDING, TYPE ERNMIX-106	SY	70	50	20
23	STRAW MULCHING	SY	70	50	20

LEGEND	
EXISTING	PROPOSED

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SCALE: AS SHOWN

DATE: 06/24/22

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CHECKED BY: BKP

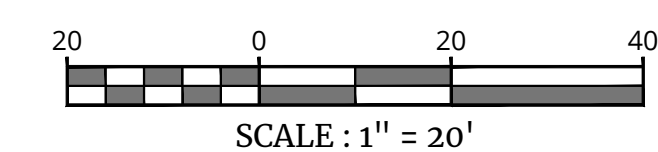
PROJECT NUMBER: CDT0078

DRAWING NAME: C-CURB

SHEET TITLE: GENERAL NOTES & QUANTITIES

SHEET NUMBER: 2 of 18

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.



POINT PNEZD DATA				
POINT NUMBER	NORTHING	EASTING	ELEVATION	RAW DESCRIPTION
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8532	659494.7250	548838.6630	58.248	MON FND
8791	659511.3000	548764.1930	55.958	MON FND
9297	659568.4260	548826.9430	56.420	IPF

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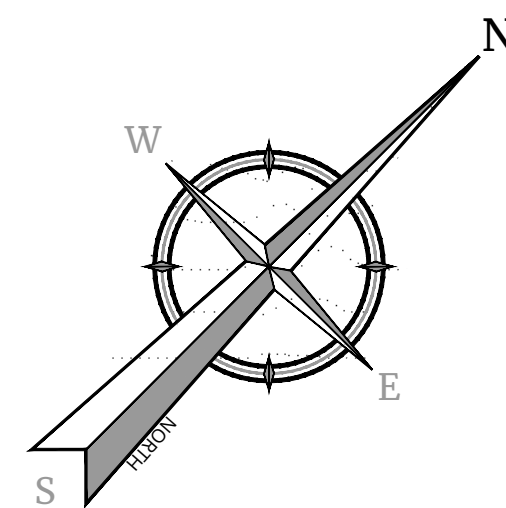
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PROJECT NUMBER: CDT0078
DRAWING NAME: C-DEMO

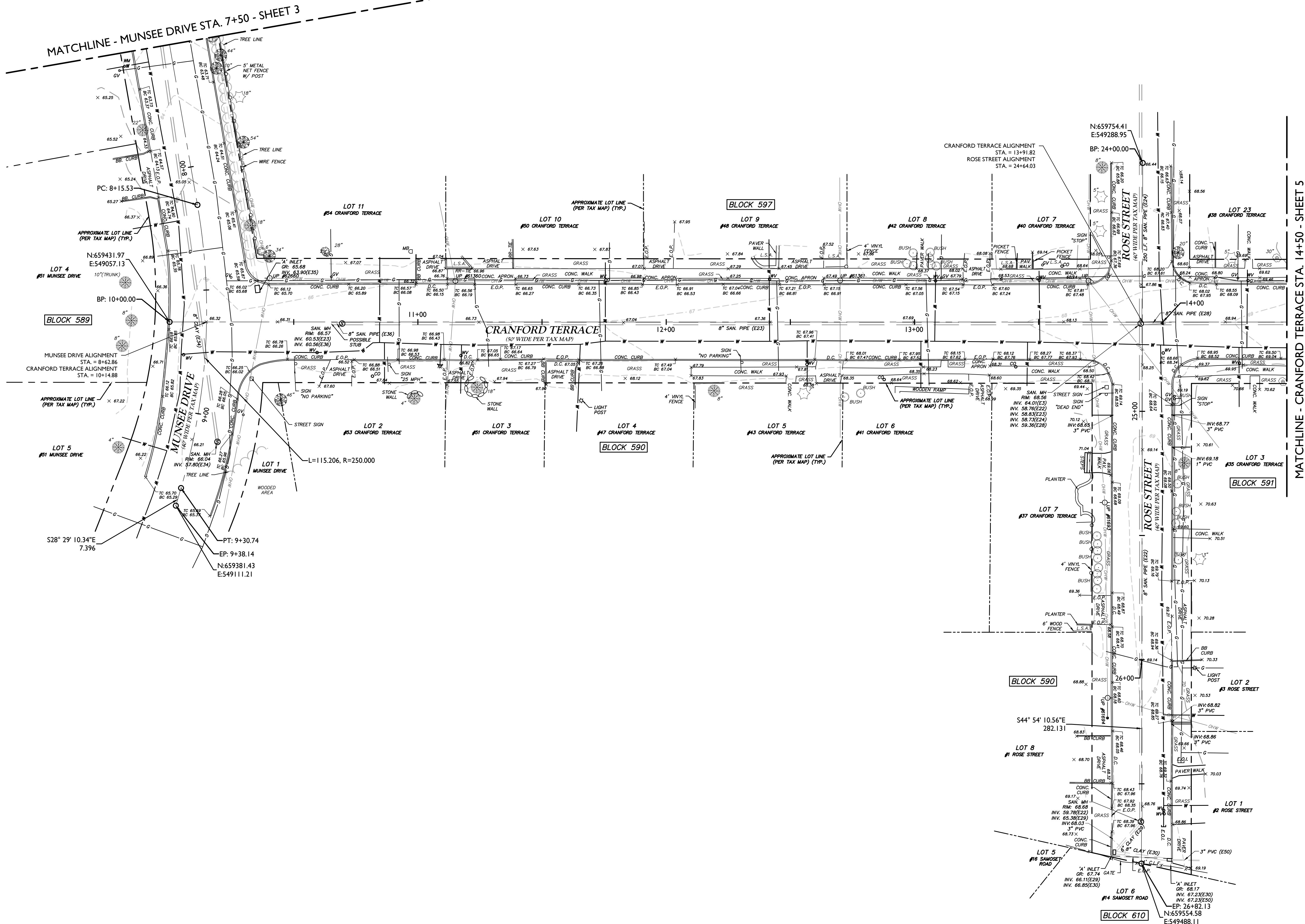
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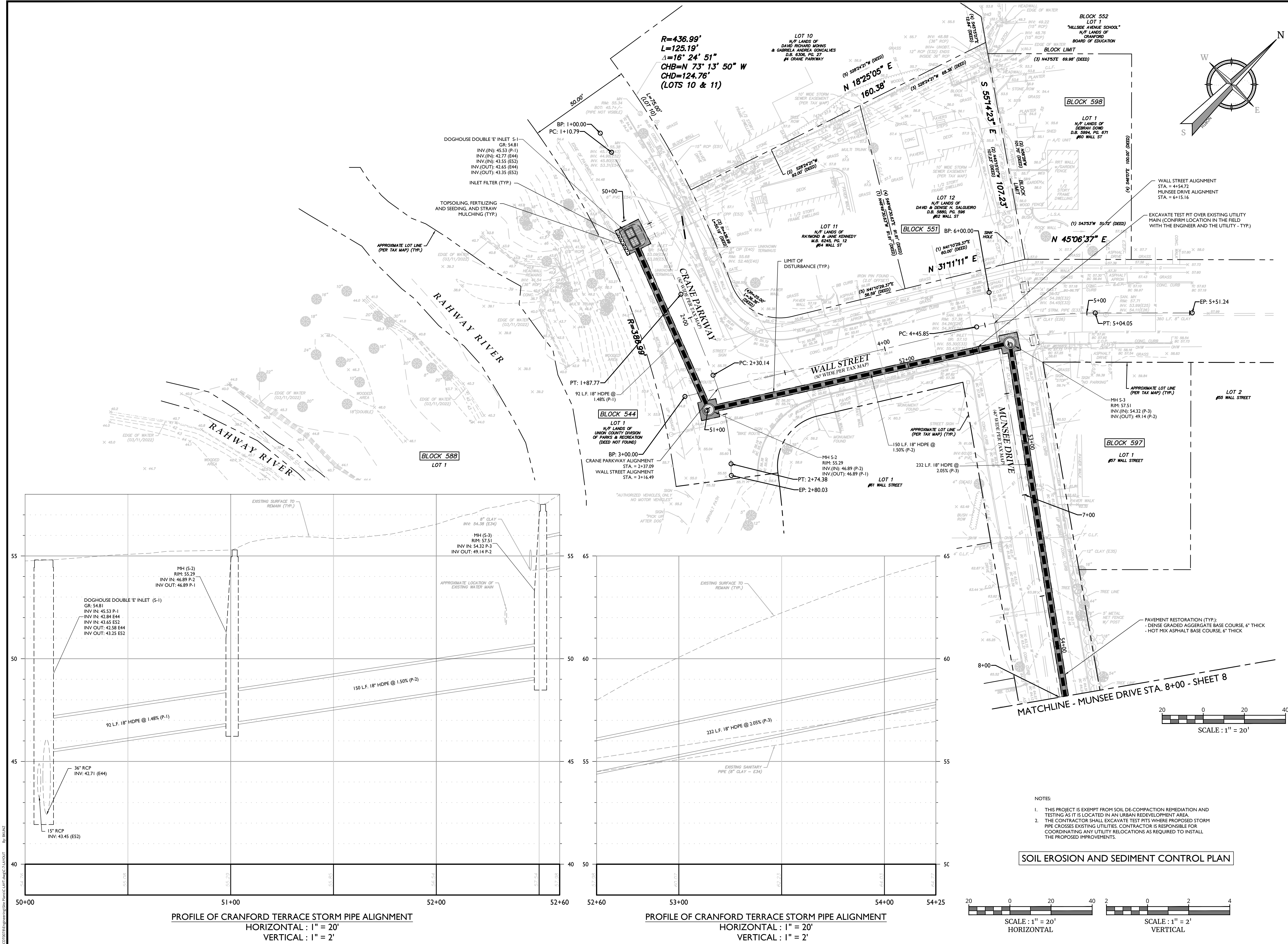
SHEET NUMBER:
4 of 18



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SCALE : 1" = 20'

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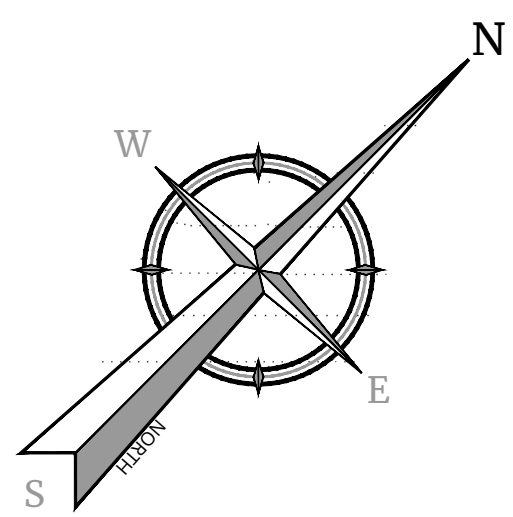
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SHEET TITLE: DIMENSION PLAN

SHEET NUMBER: 7 of 18

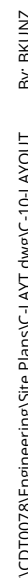
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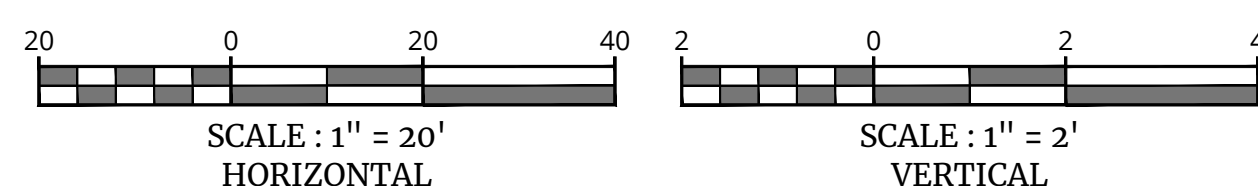
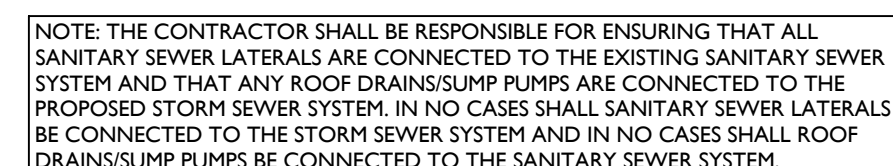
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NOTES:

1. THIS PROJECT IS EXEMPT FROM SOIL DE-COMPACTION REMEDIATION AND TESTING AS IT IS LOCATED IN AN URBAN REDEVELOPMENT AREA.
2. THE CONTRACTOR SHALL EXCAVATE TEST PITS WHERE PROPOSED STORM-PIPE CROSSES EXISTING UTILITIES. CONTRACTOR IS RESPONSIBLE FOR COORDINATING ANY UTILITY RELOCATIONS AS REQUIRED TO INSTALL THE PROPOSED IMPROVEMENTS.

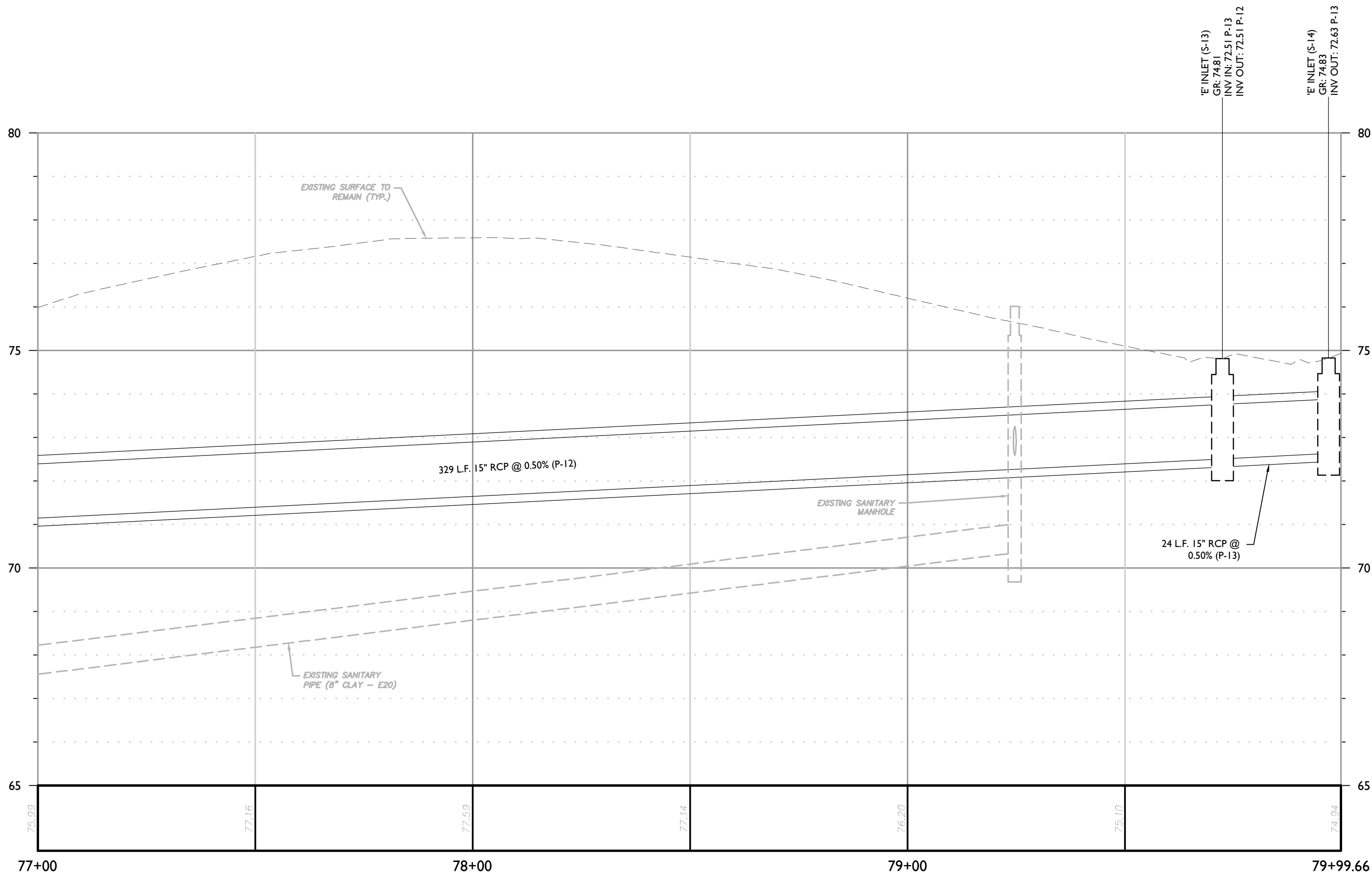
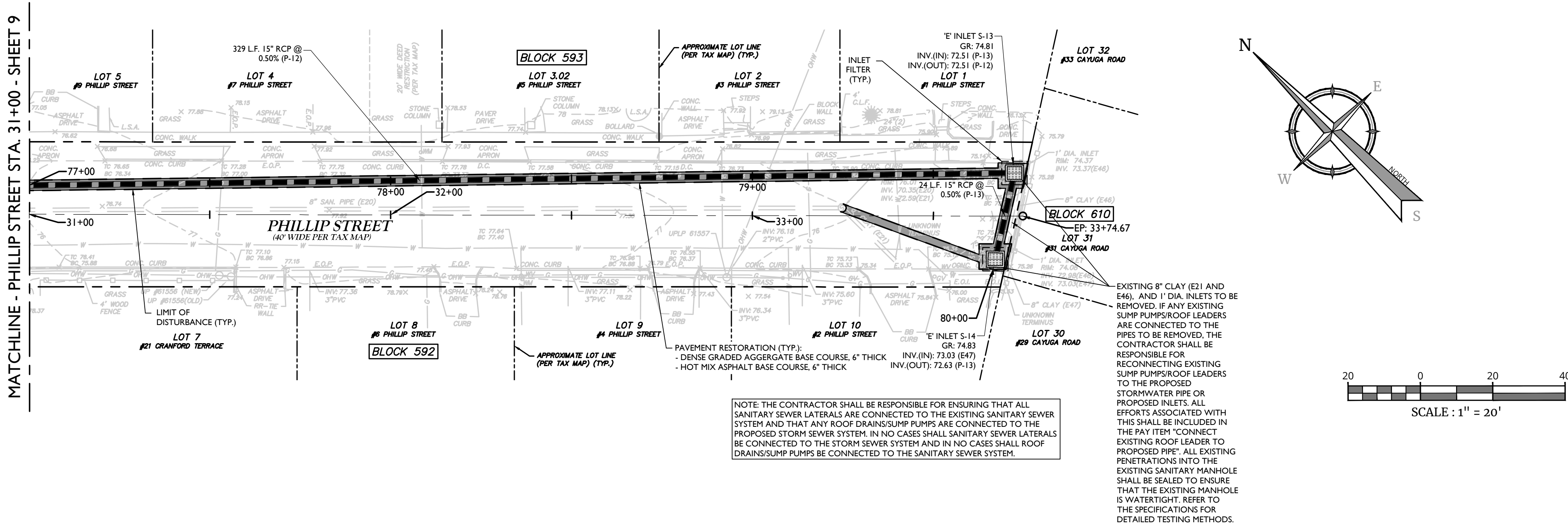
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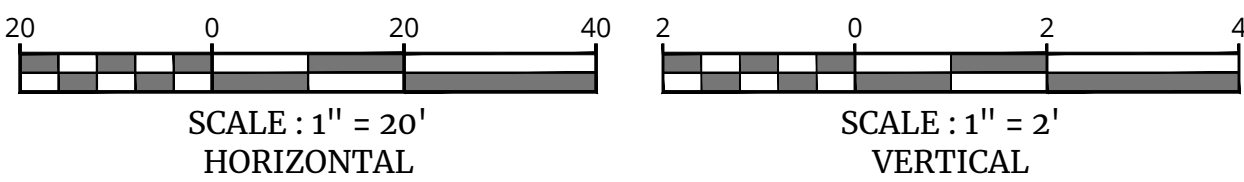
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SHEET NUMBER: 11 of 18

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PROFILE OF PHILLIP STREET STORM PIPE ALIGNMENT
HORIZONTAL : 1" = 20'
VERTICAL : 1" = 2'



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SOIL EROSION AND SEDIMENT CONTROL PLAN

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N.J. C.O.A. #: 24GA27986500

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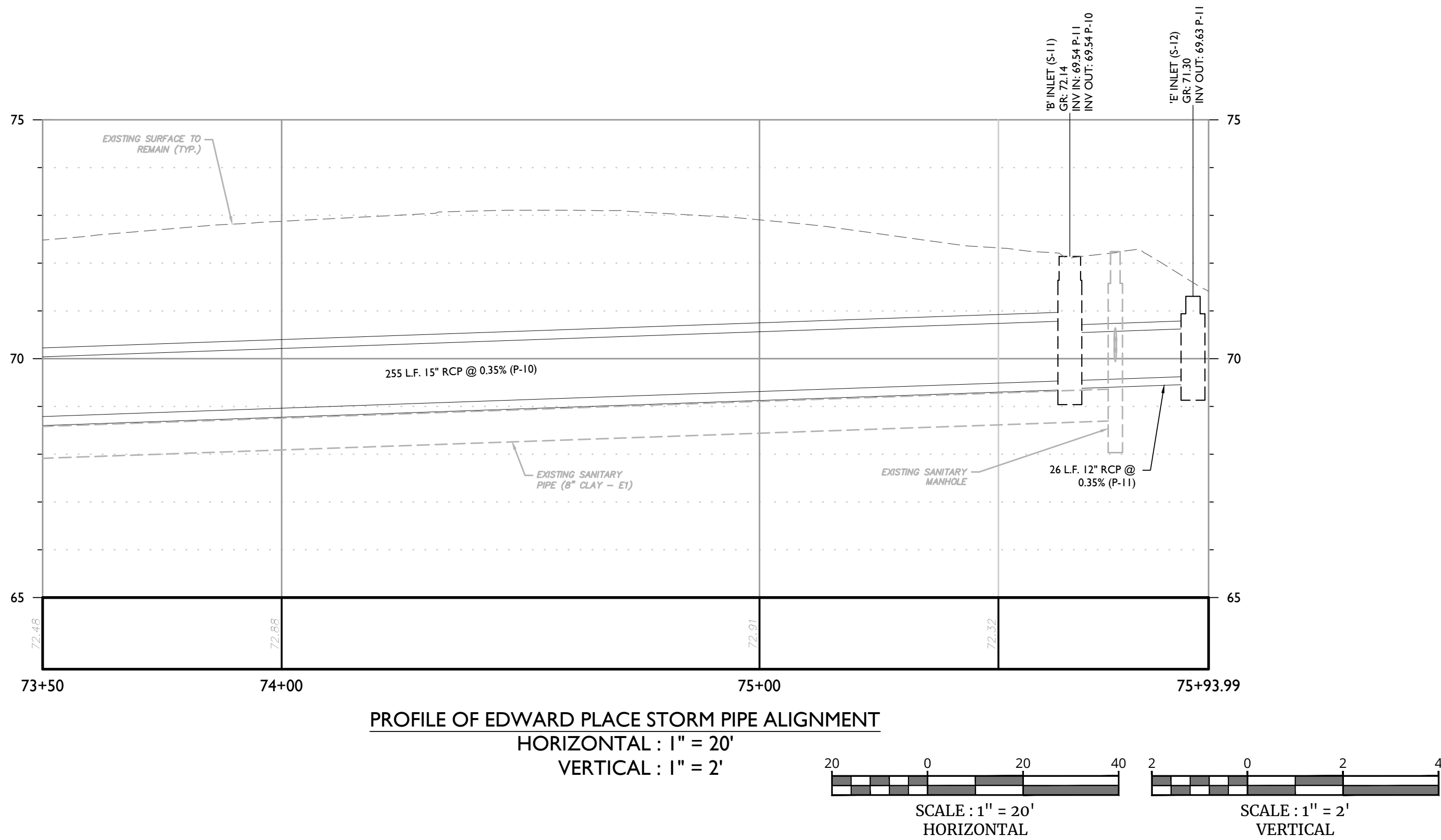
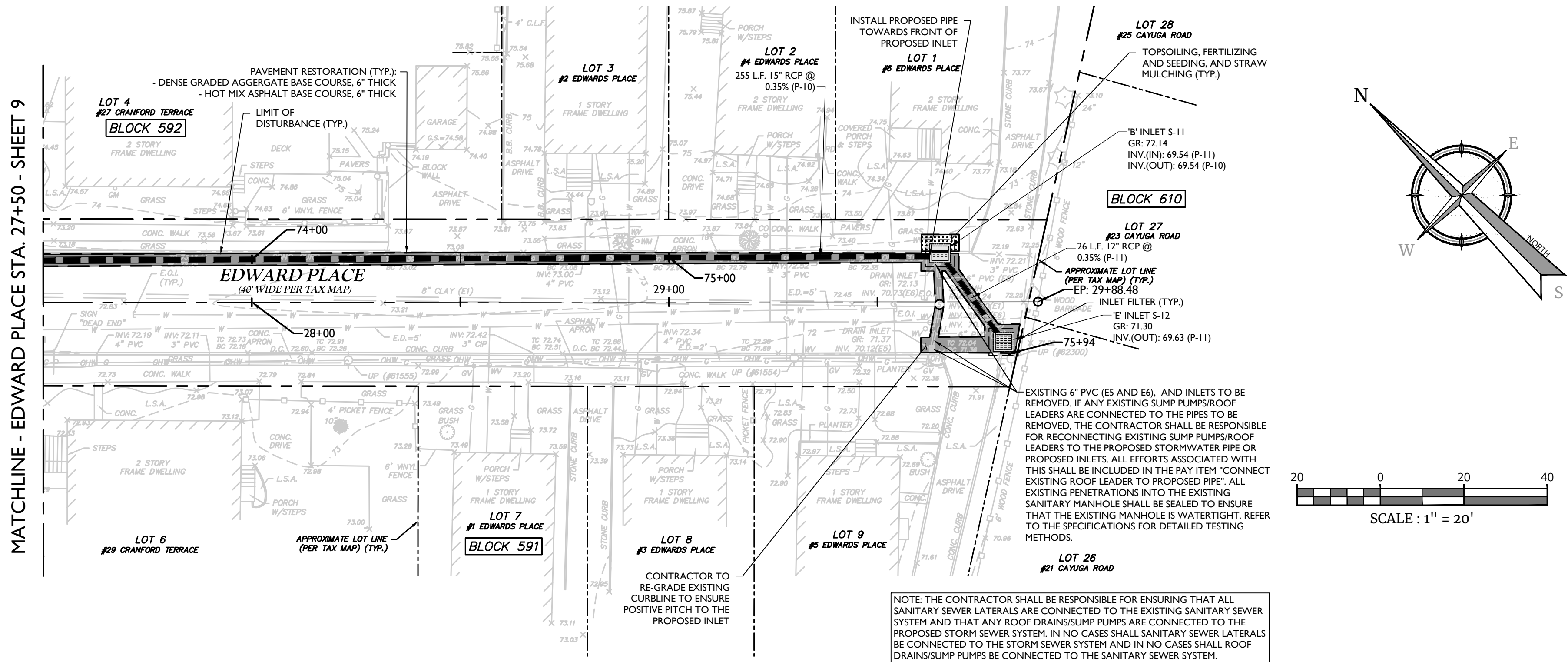
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PROJECT NUMBER: CDT0078 DRAWING NAME: C-LAYT

SHEET TITLE:
DIMENSION PLAN

SHEET NUMBER:
12 of 18

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

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SOIL EROSION AND SEDIMENT CONTROL PLAN

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PROJECT NUMBER: CDT0078. DRAWING NAME: C-LAY1.

DIMENSION PLAN

SHEET NUMBER: 13 of 18

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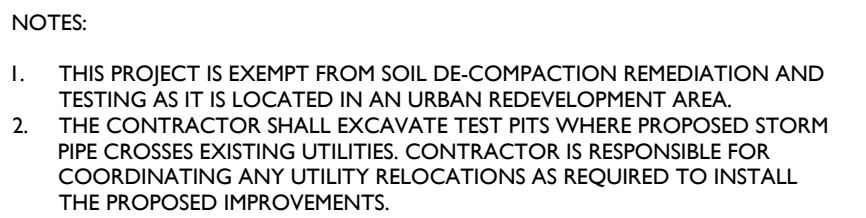
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DIMENSION PLAN

SHEET NUMBER:
14 of 18



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MCNJ-SOIL-NOTE-1013 05/01/17

I. SITE PREPARATION

THE FOLLOWING METHODS SHOULD BE CONSIDERED FOR CONTROLLING DUST:

VEGETATIVE COVER

SPRAY-ON ADHESIVES ON MINERAL SOILS (NOT EFFECTIVE ON MUCK SOILS). KEEP TRAFFIC OFF THESE AREAS.

SPRAY-ON ADHESIVES

SPRAY-ON ADHESIVES ON MINERAL SOILS (NOT EFFECTIVE ON MUCK SOILS). KEEP TRAFFIC OFF THESE AREAS.

SPRAY-ON ADHESIVES

SPRAY-ON ADHESIVES ON MINERAL SOILS (NOT EFFECTIVE ON MUCK SOILS). KEEP TRAFFIC OFF THESE AREAS.

<u>TILLAGE</u>	TO ROUGHEN SURFACE AND BRING CLODS TO THE SURFACE. THIS IS A TEMPORARY EMERGENCY MEASURE WHICH SHOULD BE USED BEFORE SOIL BLOWING STARTS. BEGIN PLOWING ON WINDWARD SIDE OF SITE. CHISEL THE ROWS SPACED ABOUT 12 INCHES APART. SPRING-TOOTHED HARROWS ARE EXAMPLES OF EQUIPMENT WHICH MAY PRODUCE THE DESIRED EFFECT.
<u>SPRINKLING</u>	SITE IS SPRINKLED UNTIL THE SURFACE IS WET.
<u>BARRIERS</u>	SOLID BOARD FENCES, SNOW FENCES, BURLAP FENCES, CRATE WALLS, BALES OF HAY, AND SIMILAR MATERIAL CAN BE USED TO CONTROL AIR CURRENTS AND SOIL BLOWING.
<u>CALCIUM CHLORIDE</u>	SHALL BE IN THE FORM OF LOOSE, DRY GRANULATES OF FLAKES FINE ENOUGH TO FEED THROUGH COMMONLY USED SPREADERS AT A RATE THAT WILL KEEP SURFACE MOIST BUT NOT CAUSE POLLUTION OR PLANT DAMAGE. IF USED ON STEEPER SLOPES, THEN USE OTHER PRACTICES TO PREVENT WASHING INTO STREAMS OR ACCUMULATION AROUND PLANTS.
<u>STONE</u>	COVER SURFACING WITH CRUSHED STONE OR COARSE GRAVEL.

IMPLEMENTATION OF SOIL EROSION & SEDIMENT CONTROL MEASURES INCLUDING:

- INLET FILTERS	1 DAY
- SILT FENCE	1 DAY

CONSTRUCT IMPROVEMENTS:

- | | |
|---|---------|
| - INSTALL PAVEMENT | 1 WEEKS |
| - UNIFORMLY APPLY TOPSOIL TO AN AVERAGE DEPTH OF 5". MINIMUM OF 4"; FIRMED IN PLACE | 1 DAY |
| - FERTILIZING, SEEDING AND STRAW MULCHING | 2 DAYS |
| - REMOVAL OF SOIL EROSION & SEDIMENT CONTROL MEASURES | 1 DAY |

NOTE: TOTAL ESTIMATED PROJECT DURATION: 6 WEEKS

THIS SCHEDULE IS FOR SOIL EROSION AND SEDIMENT CONTROL PURPOSES ONLY

STOCKPILE

- I. ALL EXCAVATED MATERIAL, INCLUDING TOPSOIL, SHALL BE DISPOSED OF OFF-SITE. ALL TOPSOIL STOCKPILES SHALL BE REMOVED ON A DAILY BASIS.

TOTAL PROJECT AREA OF DISTURBANCE = 9,765 SF OR 0.22 ACRES

MCNJ-SOIL-EROS-1500 09/01/17

MOD: 05/16

NOTES:

1. PROTECTIVE FENCING IS TO BE ERECTED PRIOR TO CONSTRUCTION AND MAINTAINED DURING CONSTRUCTION AS DIRECTED BY THE LANDSCAPE ARCHITECT. SOIL CONSERVATION DISTRICT AND/OR MUNICIPAL ENGINEER.
2. NO CONSTRUCTION ACTIVITY IS PERMITTED WITHIN THE PROTECTIVE FENCING.
3. AS CONSTRUCTION NEARS COMPLETION THE FENCING WILL BE REMOVED AS DIRECTED.
4. AT THE COMPLETION OF CONSTRUCTION, ALL TREES WILL BE PRUNED AS NECESSARY TO CORRECT ANY DAMAGE RESULTING FROM CONSTRUCTION ACTIVITY.
5. GENERAL MECHANICAL DAMAGE - SEE CRITICAL ROOT ZONE CALCULATION (CRZ) FOR CORRECT PLACEMENT OF TREE PROTECTION.
6. BOX TREES WITHIN 25 FEET OF A BUILDING SITE TO PREVENT MECHANICAL INJURY. FENCING OR OTHER BARRIER SHOULD BE INSTALLED BEYOND THE CRITICAL ROOT ZONE.
7. BOARDS WILL NOT BE NAILED TO TREES DURING BUILDING OPERATIONS.
8. FEEDER ROOTS SHOULD NOT BE CUT IN AN AREA INSIDE THE PROTECTED ROOT ZONE (PRZ) OR CRITICAL ROOT ZONE (CRZ). TREE ROOT SYSTEM COMMONLY EXTEND BEYOND THE DIBL LINE.
9. DAMAGED TRUNKS OR EXPOSED ROOTS SHOULD HAVE DAMAGED BARK REMOVED IMMEDIATELY AND NO PAINT SHALL BE APPLIED. EXPOSED ROOTS SHOULD BE COVERED WITH TIGHTLY FITTING IMMEDIATELY AFTER EXCAVATION IS COMPLETE. ROOTS SHALL BE PRUNED TO GIVE A CLEAN, SHARP SURFACE AMENABLE TO HEALING. ROOTS EXPOSED DURING HOT WEATHER SHOULD BE IRRIGATED TO PREVENT PERMANENT TREE INJURY. CARE FOR SERIOUS INJURY SHOULD BE PRESCRIBED BY A PROFESSIONAL FORESTER OR CERTIFIED TREE EXPERT.
10. TREE LIMB REMOVAL WHERE NECESSARY, WILL BE DONE AS NATURAL TARGET PRUNING TO REMOVE THE DESIRED BRANCH COLLAR. THERE SHOULD BE NO FLUSH CUTS. FLUSH CUT DESTROY A MAJOR DEFENSE SYSTEM OF THE TREE. NO TREE PAINT SHALL BE APPLIED. ALL CUTS SHALL BE MADE AT THE OUTSIDE EDGE OF THE BRANCH COLLAR. CUTS MADE TOO FAR BEYOND THE BRANCH COLLAR MAY LEAD TO EXCESS SPROUTING, CRACKS AND ROT. REMOVAL OF A "Y" CROTCH SHOULD BE CONSIDERED FOR FREE STANDING SPECIMEN TREES TO AVOID FUTURE SPLITTING DAMAGE.
11. CRITICAL ROOT ZONE (CRZ) OR PROTECTED ROOT ZONE (PRZ) CALCULATION:
MEASURE DIBL OF TREE IN BREAST HEIGHT OR 4.5' ABOVE GROUND ON THE UPHILL SIDE IN INCHES.
CRZ OR PRZ = DIB H TIMES 1.5 (FOR OLD/UNHEALTHY/SENSITIVE TREES) OR DIB X 1.0 (FOR YOUNG/HEALTHY/TOLERANT TREES), EXPRESS IN FEET.

NOTES

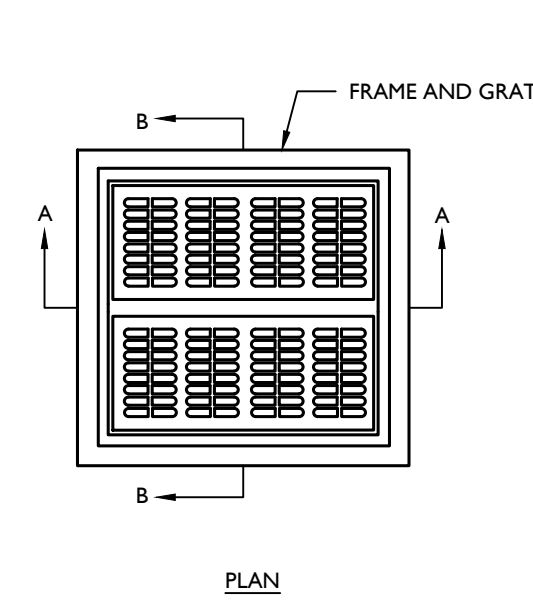
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|---|---|
| 1. MEASURE THE DBH (DIAMETER OF TREE AT BREAST HEIGHT, 4.5' ABOVE GROUND ON THE UPHILL SIDE) IN INCHES. | 1. MEASURE THE DBH (DIAMETER OF TREE AT BREAST HEIGHT, 4.5' ABOVE GROUND ON THE UPHILL SIDE) IN INCHES. |
| 2. PROTECTED ROOT ZONE (PRZ) = CRITICAL ROOT ZONE IN FEET = DBH (INCHES) X 1.5' (FOR OLD/SENESCENT TREES) OR DBH X 1.0 (FOR YOUNG/TOLERANT TREES) | 2. PROTECTED ROOT ZONE (PRZ) = CRITICAL ROOT ZONE IN FEET = DBH (INCHES) X 1.5' (FOR OLD/SENESCENT TREES) OR DBH X 1.0 (FOR YOUNG/TOLERANT TREES) |
| 3. TILE AND GRAVEL WILL ALLOW AIR CIRCULATION TO ROOT ZONE UNDER A FILL | |

FILE	MCNJ-SOIL-EROS-2101	07/01/21
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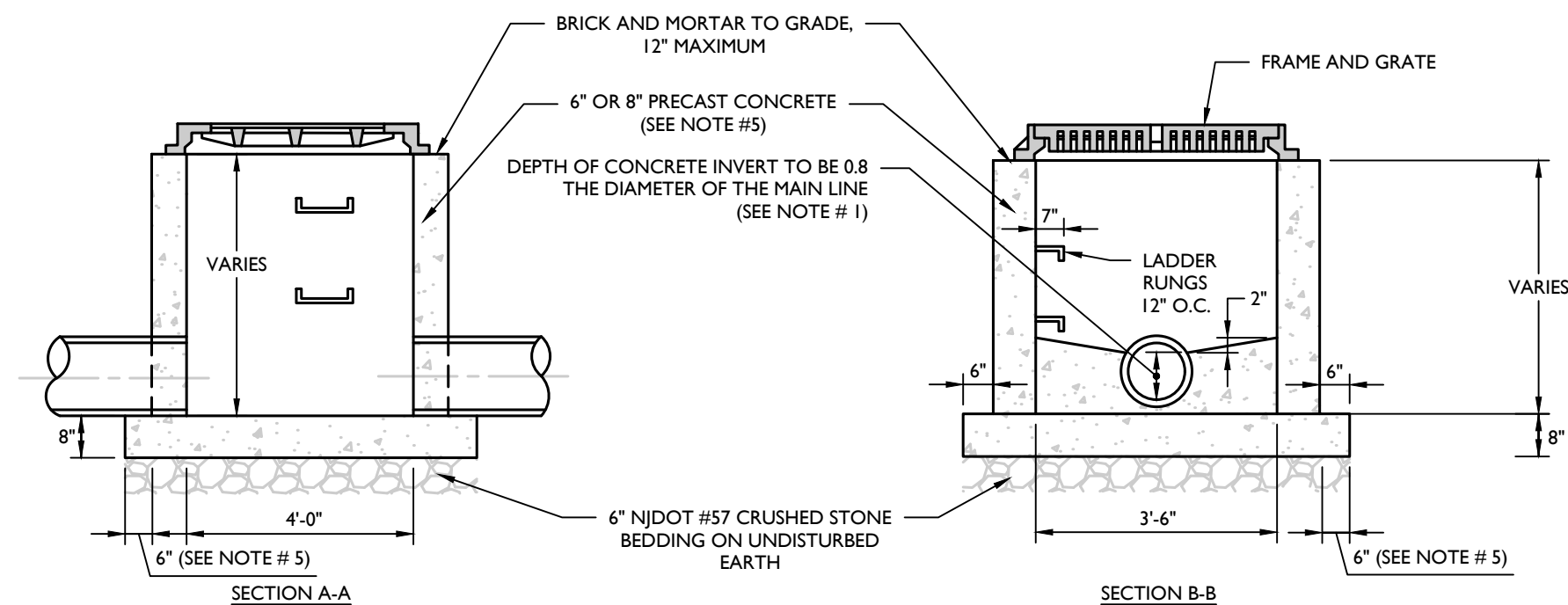
MCNJ-SOIL-EROS-2102 05/01/17

PAVEMENT RESTORATION DETAIL
N.T.S.

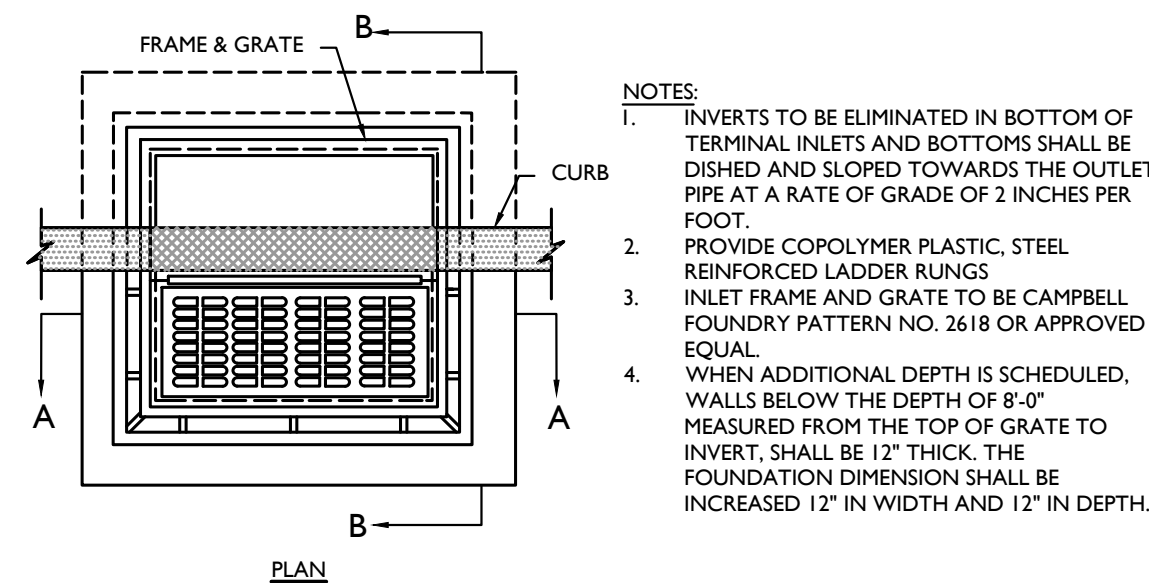
- NOTES:
1. TRAVERSE JOINTS $\frac{1}{4}$ " WIDE SHALL BE INSTALLED IN THE CURB 20 FEET APART AND SHALL BE FILLED WITH PREFORMED BITUMINOUS-IMPREGNATED FIBER JOINT FILLER RECESSED $\frac{1}{4}$ " IN FROM FRONT FACE AND TOP OF CURB.
 2. EXPANSION JOINTS THRU AND ADJACENT TO THE CURB SHALL BE INCLUDED IN THE UNIT PRICE FOR THE CURB. PROVIDE DUMPY JOINTS (FORMED) MIDWAY BETWEEN EXPANSION JOINTS.
 3. CURB SHALL ONLY BE INSTALLED ON AN IF/WHEN BASIS AS DIRECTED BY THE ENGINEER.



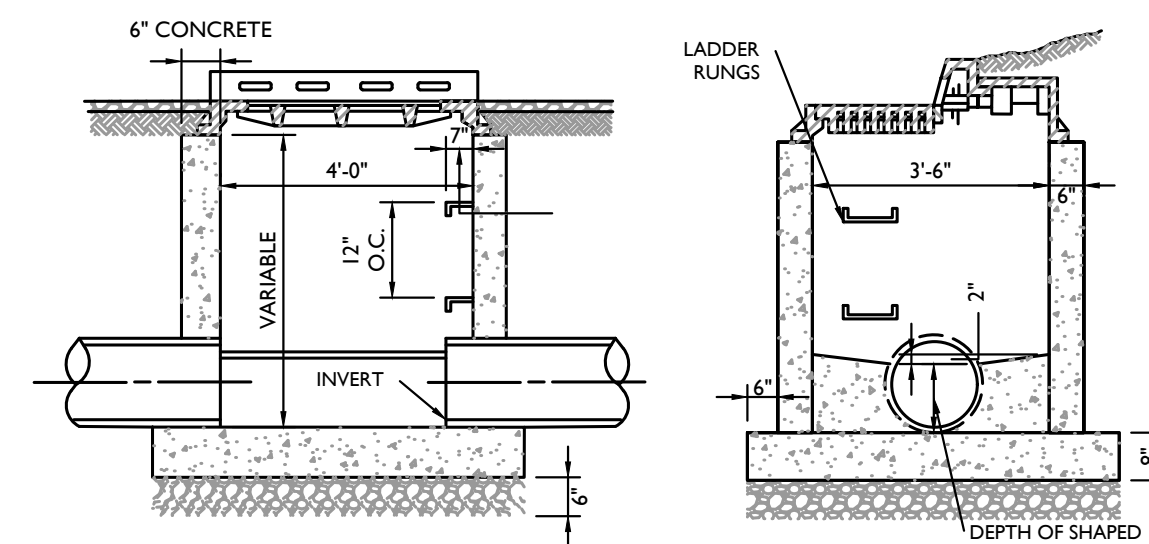
- NOTES:**
1. INVERTS TO BE ELIMINATED IN BOTTOM OF TERMINAL INLETS. BOTTOMS SHALL BE DISHED AND SLOPED TOWARDS THE OUTLET PIPE AT A RATE OF GRADE OF 2 INCHES PER FOOT.
 2. THIS INLET SHALL BE CONSTRUCTED OF PRECAST CONCRETE.
 3. PROVIDE 7/8" DIA. X 7" X 12" 12' O.C. COPOLYMER POLYPROPYLENE PLASTIC STEPS WITH 1/2" DIA. GRADE 60 STEEL REINFORCEMENT, F50-PP OR F50-B WITH PRECAST PRESS FIT INSERTS, OR APPROVED EQUIVALENT.
 4. INLET FRAME AND GRATES TO BE CAMPBELL FOUNDRY PATTERN # 2618 OR APPROVED EQUAL.
 5. WHEN DEPTH IS GREATER THEN 12" THE WALLS SHOULD BE EITHER 8" THICK CONCRETE AND THE FOOTING SHALL BE EXTENDED TO 12" BEYOND THE OUTSIDE WALLS.
 6. ALL CONCRETE TO BE NJDOT CLASS "B"
 7. INLETS SHALL BE CONSTRUCTED IN ACCORDANCE WITH H-20 LOADING REQUIREMENTS.



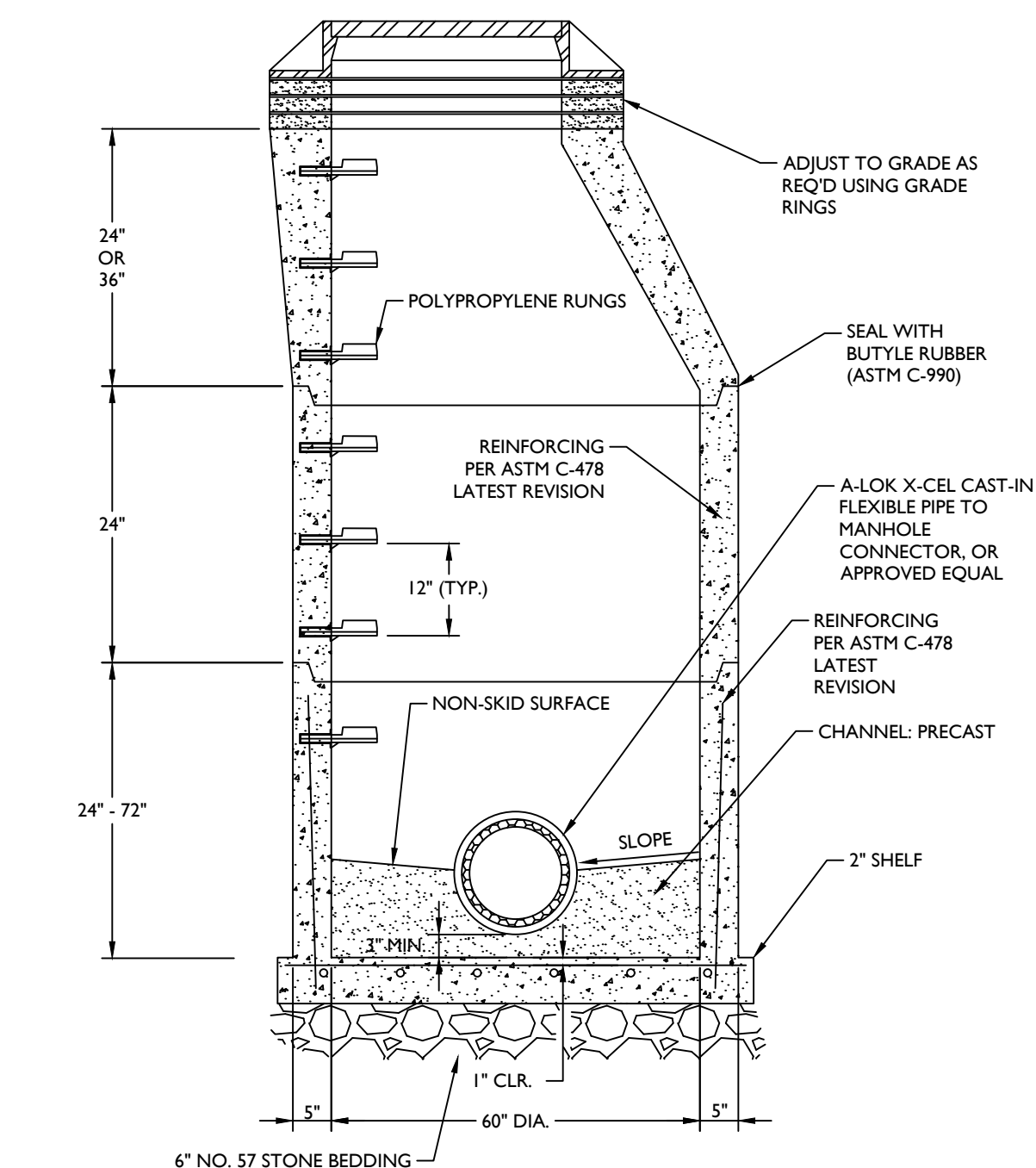
TYPE 'E' INLET
N.T.S.



- NOTES:**
1. INVERTS TO BE ELIMINATED IN BOTTOM OF TERMINAL INLETS AND BOTTOMS SHALL BE DISHED AND SLOPED TOWARDS THE OUTLET PIPE AT A RATE OF GRADE OF 2 INCHES PER FOOT.
 2. PROVIDE COPOLYMER PLASTIC, STEEL REINFORCED LADDER RUNGS
 3. INLET FRAME AND GRATE TO BE CAMPBELL FOUNDRY PATTERN NO. 2618 OR APPROVED EQUAL
 4. WHEN ADDITIONAL DEPTH IS SCHEDULED, WALLS BELOW THE DEPTH OF 8'-0" MEASURED FROM THE TOP OF GRATE TO INVERT, SHALL BE 12" THICK. THE FOUNDATION DIMENSION SHALL BE INCREASED 12" IN WIDTH AND 12" IN DEPTH.

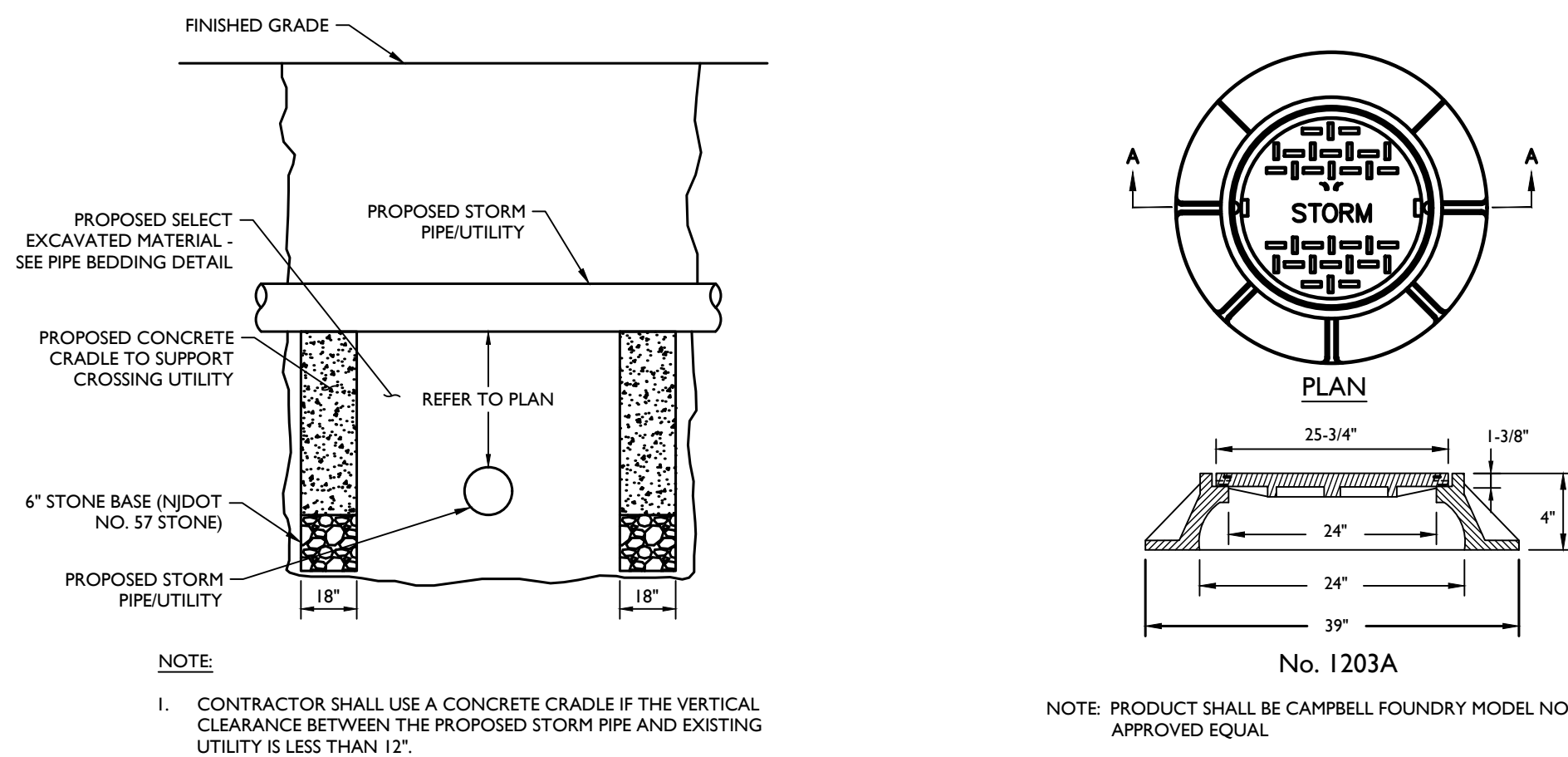


TYPE 'B' INLET
N.T.S.

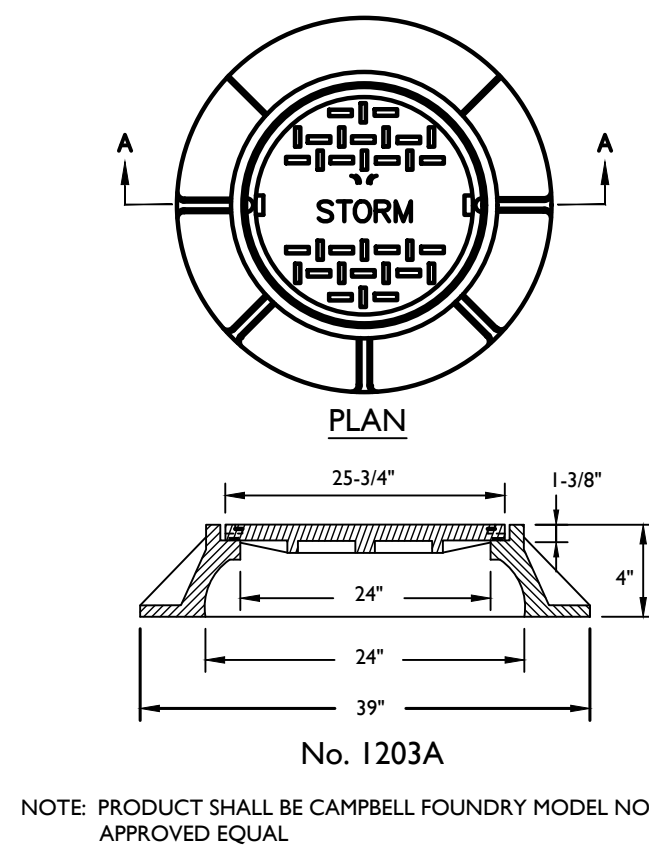


- GENERAL MANHOLE NOTES:**
1. MANHOLES SHALL BE CONSTRUCTED OF PRECAST CONCRETE.
 2. CASTINGS OF PRECAST MANHOLES SHALL BE ADJUSTED TO GRADE WITH PRECAST CONCRETE GRADE RINGS, AS REQUIRED, 12 INCHES MAXIMUM.
 3. WHERE EXISTING PIPE IS TO BE CONNECTED TO NEW MANHOLE, 5 FEET OF NEW PIPE AND COUPLINGS SHALL BE INCLUDED IN COST OF MANHOLE.
 4. PRECAST MANHOLES SHALL MEET THE REQUIREMENTS OF ASTM C-478, "PRECAST REINFORCED CONCRETE MANHOLE SECTIONS".
 5. REINFORCED CONCRETE STRUCTURES SHALL WITHSTAND AASHTO HS-20 LIVE LOAD CONDITIONS.
 6. IMPROVE PRECAST MANHOLE SLAB IN LIEU OF STANDARD PRECAST TOP SECTION FOR MANHOLES HAVING 6'-9" DEPTH OR LESS.

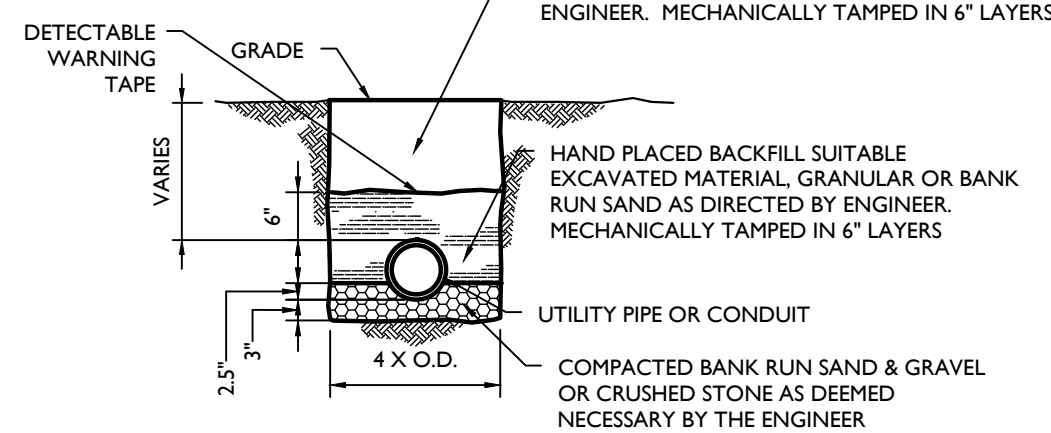
STORM MANHOLE
N.T.S.



CONCRETE CRADLE
N.T.S.

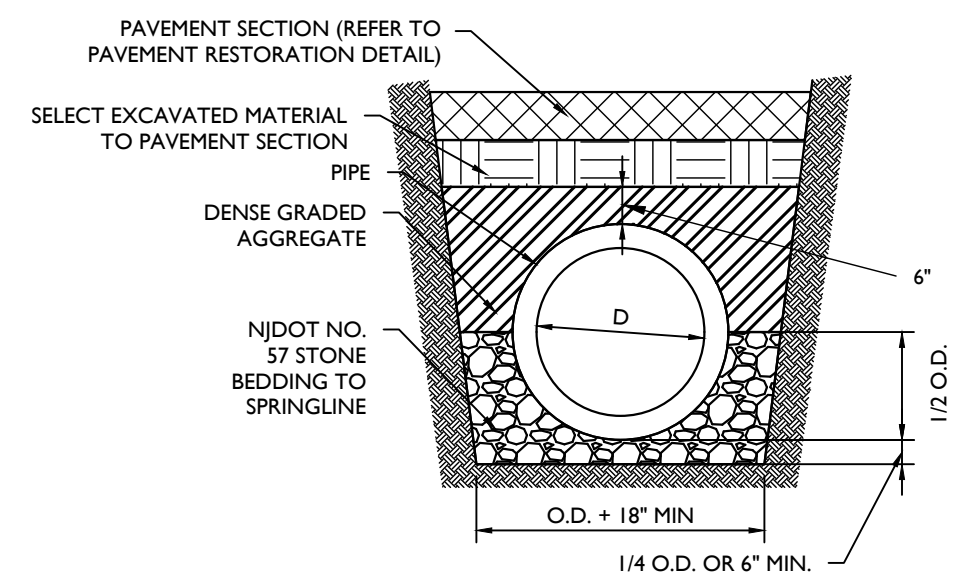


STANDARD MANHOLE COVER/FRAMES



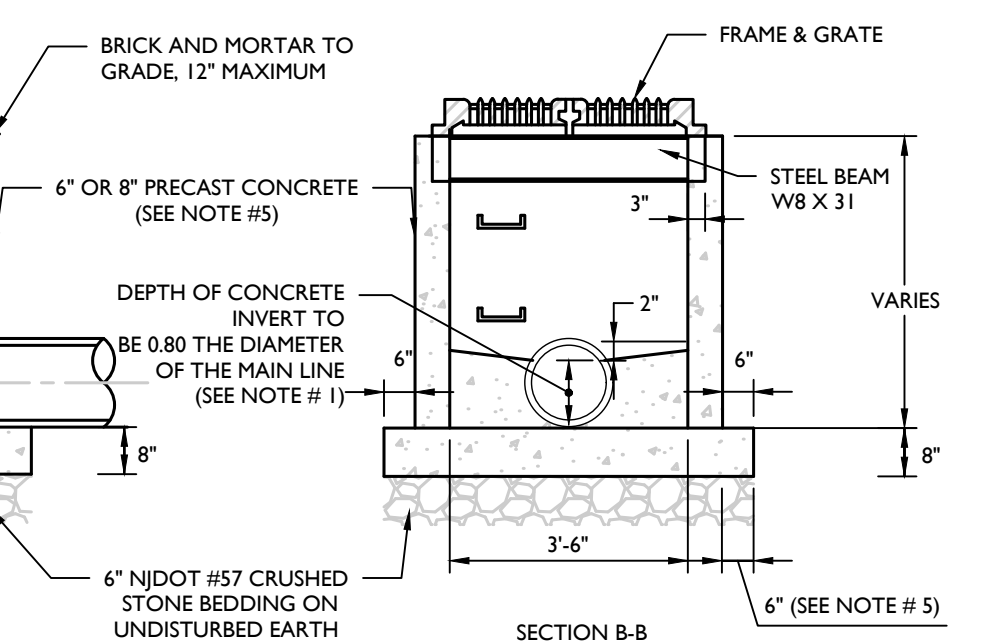
- NOTES:
I. INSTALLATION SHALL BE AS PER THE UTILITY COMPANY, CRANFORD BUILDING DEPARTMENT, CRANFORD DEPARTMENT OF PUBLIC WORKS AND ENGINEER REQUIREMENTS.

UTILITY SERVICE DETAILS
N.T.S.

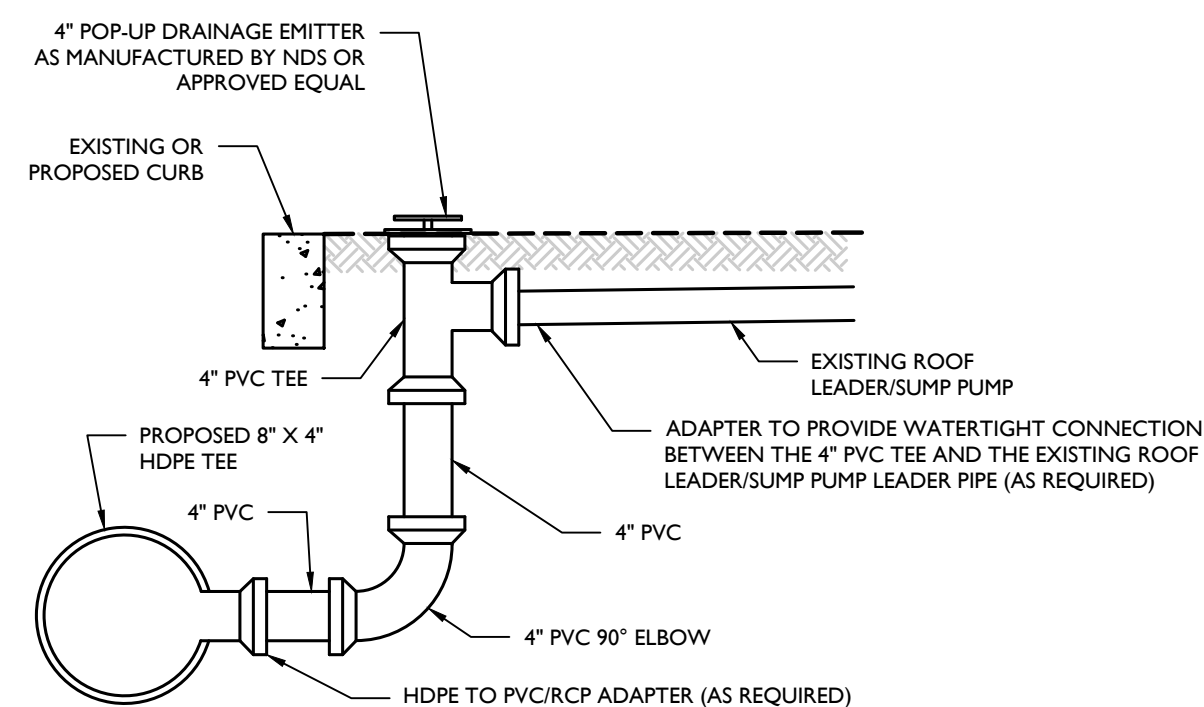


- NOTES:**
1. BACKFILL TO BE PLACED SO AS TO ENSURE SUFFICIENT COMPACTION UNDER PIPE HAUNCHES.
 2. THE PIPE OR UTILITY TRENCH TO BE BACKFILLED IN ACCORDANCE WITH THE SPECIFICATIONS FOR BACKFILLING. ENSURE THE WIDTH IS 36" MINIMUM OF THE OUTSIDE DIAMETER OF THE PIPE PLUS 18".

HDPE & RCP PIPE BEDDING



TYPE DOUBLE 'E' INLET
N.T.S.



ROOF LEADER/SUMP PUMP CONNECTION DETAIL
N.T.S.

[illegible]

Carl P. O'R

Carl P. O'Brien
NEW JERSEY LICENSED PROFESSIONAL ENGINEER
LICENSE NUMBER: GE45154
COLLIERS ENGINEERING & DESIGN, INC.
N.J. C.O.A. #: 24GA27986500

CONSTRUCTION PLANS

FOR
INFLOW AND
INFILTRATION 2022

TOWNSHIP OF CRANFORD
COUNTY OF UNION
STATE OF NEW JERSEY



Colliers
Engineering
& Design

MT. ARLINGTON
400 Valley Road,
Suite 304
Mt. Arlington, NJ 078
Phone: 973.398.311

SCALE: AS SHOWN	DATE: 06/24/22	DRAWN BY: BAK	CHECKED BY: BKP
PROJECT NUMBER: CDT0078		DRAWING NAME: C-DTLS	

CONSTRUCTION DETAILS

SHEET NUMBER: 16 of 18

