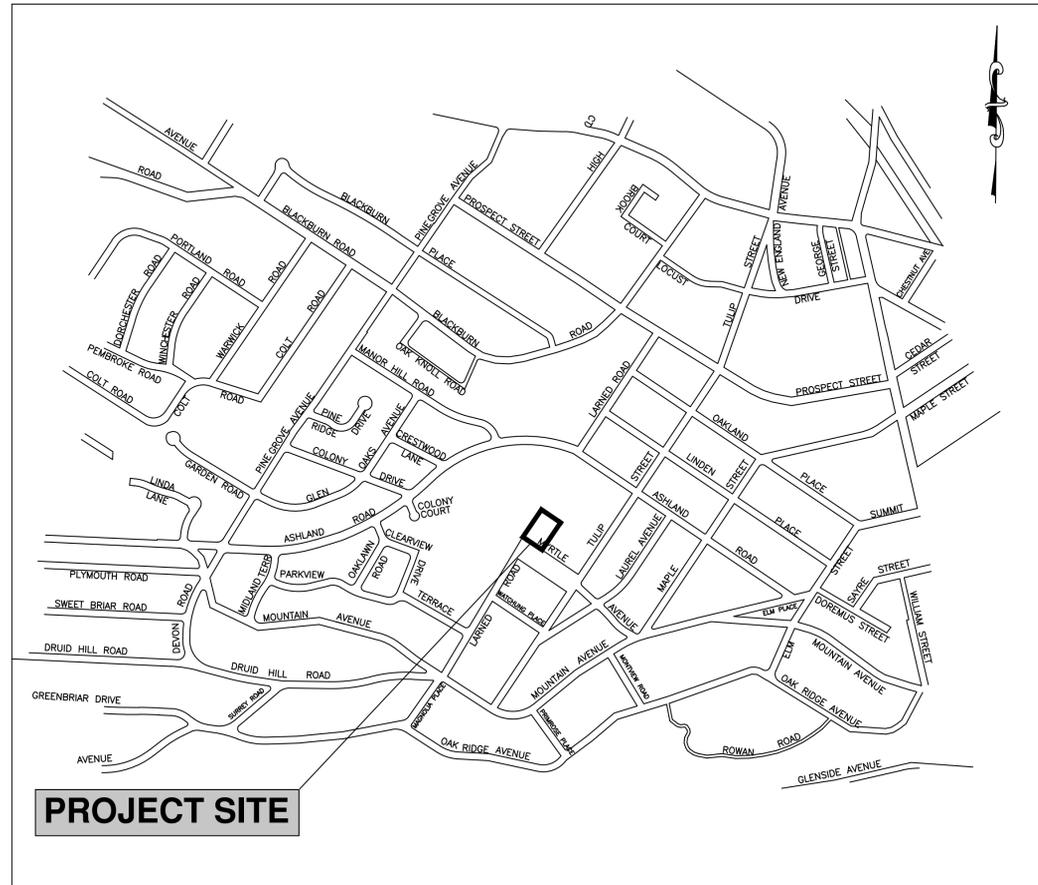


MEMORIAL FIELD ENTRANCE & CULVERT RENOVATION

CONSTRUCTION PLANS PROJECT INFORMATION

CITY OF SUMMIT, UNION COUNTY, NEW JERSEY



GENERAL CONSTRUCTION NOTES:

1. THE CONTRACTOR SHALL NOTIFY THE ENGINEER, THE SUMMIT POLICE DEPARTMENT AND BRAYTON SCHOOL 72 HOURS PRIOR TO THE START OF ANY WORK.
2. NO SEPARATE PAYMENT SHALL BE MADE FOR FLAGGERS. ALL COSTS FOR FLAGGERS SHALL BE INCLUDED IN VARIOUS BID ITEMS IN THE BID PROPOSAL.
3. ACCESS TO THE CORNOG FILED HOUSE AND THE PLAYGROUND MUST BE MAINTAINED AT ALL TIMES.
4. ALLOWABLE HOURS OF WORK ARE 8:00 AM TO 4:30 PM. THE CONTRACTOR SHALL MAKE PROVISIONS FOR MATERIAL AND EQUIPMENT STORAGE. THE CONTRACTOR SHALL COORDINATE THE STORAGE OF MATERIAL AND EQUIPMENT WITH THE ENGINEER AND THE POLICE DEPARTMENT. ALL COSTS FOR MATERIAL AND EQUIPMENT STORAGE SHALL BE INCLUDED IN THE VARIOUS BID ITEMS IN THE BID PROPOSAL.
5. ALL TRAFFIC CONTROL AND TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH THE M.U.T.C.D. AND MUNICIPAL TRAFFIC ORDINANCES. THE CONTRACTOR SHALL SUBMIT TRAFFIC CONTROL PLANS TO THE POLICE DEPARTMENT FOR REVIEW AND APPROVAL PRIOR TO THE START OF THE PROJECT. THE CONTRACTOR IS RESPONSIBLE FOR ALL TRAFFIC CONTROL ON THE PROJECT. ANY COSTS ASSOCIATED WITH TRAFFIC CONTROL SHALL BE INCLUDED IN THE VARIOUS ITEMS IN THE PROJECT.
6. CONTRACTOR IS RESPONSIBLE TO COORDINATE WITH ALL UTILITIES TO RAISE OR LOWER MANHOLES, METERS, VALVES, ETC. TO GRADE AS WORK PROGRESSES. ALL COSTS FOR COORDINATION WITH UTILITY COMPANIES SHALL BE INCLUDED IN THE BID ITEM "UTILITY COORDINATION" IN THE PROJECT. THE LOCATIONS OF SUBSURFACE UTILITIES ARE APPROXIMATE AND ARE SHOWN FOR ILLUSTRATIVE PURPOSES. THE CONTRACTOR IS RESPONSIBLE TO CALL FOR A MARK OUT OF UNDERGROUND UTILITIES PRIOR TO THE START OF CONSTRUCTION.
7. THE CONTRACTOR IS RESPONSIBLE FOR REPLACEMENT OF ANY DAMAGED CONCRETE BEFORE ACCEPTANCE OF THE PROJECT BY THE CITY AT NO ADDITIONAL COST.
8. THE CONTRACTOR IS RESPONSIBLE TO PROTECT ALL TREES THAT ARE TO REMAIN WITHIN THE PROJECT DURING CONSTRUCTION. DAMAGE TO EXISTING TREES WILL BE EVALUATED BY THE CITY FORESTER. THE PROJECT SPECIFICATIONS IMPOSES A PENALTY OF \$500 PER INCIDENT OF DAMAGE TO ANY TREE. ALL COSTS RELATED TO TREE PROTECTION ARE TO BE INCLUDED IN THE BID ITEM "MOBILIZATION".
9. NO SEPARATE PAYMENT SHALL BE MADE FOR ANY SAW CUTTING REQUIRED ON THE PROJECT. COSTS FOR SAW CUTTING SHALL BE INCLUDED IN THE VARIOUS ITEMS IN THE BID PROPOSAL.
10. A TEMPORARY CHAIN-LINK FENCE IS TO BE INSTALLED TO RESTRICT ACCESS BY THE PUBLIC DURING CONSTRUCTION. THE PERIMETER OF THE TEMPORARY CHAIN-LINK FENCE IS TO INCORPORATE THE LIMIT OF DISTURBANCE AS PORTRAYED IN THE CONSTRUCTION PLANS.
11. NO SEPARATE PAYMENT SHALL BE MADE FOR EXCAVATION, UNCLASSIFIED. ALL COSTS ASSOCIATED WITH THE EXCAVATION AND DISPOSAL OF THE EXISTING SUB-BASE SHALL BE INCLUDED IN THE BID ITEM "CLEARING SITE".
12. NO SEPARATE PAYMENT SHALL BE MADE FOR THE INSTALLATION AND MAINTENANCE OF ALL SOIL EROSION AND SEDIMENT CONTROL MEASURES. ALL COSTS ARE TO BE INCLUDED IN THE BID ITEM "MOBILIZATION".
13. THE CONTRACTOR IS RESPONSIBLE FOR THE STAKEOUT AND LAYOUT OF THE PROJECT. THE STAKEOUT AND LAYOUT IS TO BE PERFORMED BY A NEW JERSEY PROFESSIONAL LAND SURVEYOR. ALL COSTS ASSOCIATED WITH THE STAKEOUT AND LAYOUT OF THE PROJECT ARE TO BE INCLUDED IN THE BID ITEM "CONSTRUCTION LAYOUT". ALL GRADES ARE TO BE SET IN THE FIELD BY THE LAND SURVEYOR. THE CONTRACTOR IS TO SUBMIT TO THE ENGINEER A PROFILE WITH THE SET GRADES PRIOR TO THE BEGINNING OF CONSTRUCTION. THE PROFILE IS SUBJECT TO THE APPROVAL OF THE ENGINEER.
14. SHOP DRAWINGS ARE TO BE SUBMITTED AT A MINIMUM OF THREE (3) WEEKS PRIOR TO CONSTRUCTION FOR ALL PROPOSED DRAINAGE STRUCTURES. ALL DRAINAGE STRUCTURES MUST BE DESIGNED BY A NEW JERSEY PROFESSIONAL ENGINEER. ALL SHOP DRAWINGS ARE SUBJECT TO THE APPROVAL OF THE ENGINEER.
15. SITE SURVEY WAS COMPLETED BY HATCH MOTT MCDONALD. CONTROL POINTS CAN BE OBTAINED FROM THE ENGINEERING DIVISION. 908-273-6404
16. ALL MATERIALS, WORKMANSHIP AND CONSTRUCTION FOR THE IMPROVEMENTS SHOWN SHALL BE IN ACCORDANCE WITH THE NEW JERSEY DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, 2007".
17. WRITTEN NOTIFICATION IS REQUIRED 72 HOURS PRIOR TO LAND DISTURBANCE TO THE SOMERSET - UNION SOIL CONSERVATION DISTRICT LOCATED AT 308 MILL TOWN ROAD, BRIDGEWATER, NJ 08807 (908) 526-2701.
18. ANY AND ALL WORK IN THE STREAM IS SUBJECT TO THE APPROVAL AND CONDITIONS OF THE NJDEP.
19. REMOVAL OF EXISTING PEDESTRIAN FOOTBRIDGE TO BE INCLUDED IN THE BID ITEM CLEARING SITE.

SUMMARY OF QUANTITIES

BASE BID ITEM	DESCRIPTION	UNITS	TOTAL
1	REPAIR OF CONCRETE DECK, TYPE B	SF	3060
2	REPAIR OF CONCRETE DECK, TYPE C	SF	40
3	CONCRETE REPAIR, TYPE 1	SF	20
4	CONCRETE REPAIR, TYPE 2	SF	20
5	REPOINTING OF STONE MASONRY	LF	100
6	SEALING EXISTING JOINTS IN CONCRETE SLAB	LF	75
7	CRACK SEALING	LF	80
8	PENETRATING SEALER	SY	350
9	REPOINTING OF STONE MASONRY, OPEN CHANNEL	LF	250
10	REMOVAL & DISPOSAL OF SEDIMENT, OPEN CHANNEL	SY	250
11	MOBILIZATION	LS	LS
12	CLEARING SITE	LS	LS
13	TREE REMOVAL, OVER 12" TO 36" IF AND WHERE DIRECTED	UNIT	2
14	MAINTENANCE AND PROTECTION OF TRAFFIC	LS	LS
15	CONSTRUCTION LAYOUT	LS	LS
16	REMOVAL OF ASPHALT	SY	1500
17	HOT MIX ASPHALT SURFACE COURSE, MIX 1-5	TON	200
18	DGA BASE COURSE, 4" THICK	CY	400
19	CONCRETE SIDEWALK, 4" THICK	SY	125
20	GRANITE CURB	LF	500
21	FUEL PRICE ADJUSTMENT	LS	LS
22	CONSTRUCTION IDENTIFICATION SIGNS	UNIT	2
23	TRAFFIC MARKINGS, THERMOPLASTIC, 4" THICK	LF	160
24	TRAFFIC MARKINGS, THERMOPLASTIC, 18" THICK	LF	100
25	TOPSOILING, 4" THICK	SY	1500
26	FERTILIZING AND SEEDING, TYPE A-3	SY	1500
27	STRAW MULCHING	SY	1500
28	SHREDDED HARDWOOD BARK MULCHING	SY	750
29	LARGE DECIDUOUS TREE	UNIT	10
30	DECIDUOUS SHRUB	UNIT	213
31	GROUND COVER	UNIT	13
32	PERENNIAL	UNIT	198
33	RIVER STONE, 1 1/2" NOYO ROCK	SY	1000
34	INLET CASTINGS, TYPE A	UNIT	2
35	INLET FILTERS, TYPE 1	UNIT	5
36	INLETS, TYPE B	UNIT	4
37	12" REINFORCED CONCRETE PIPE, CLASS IV, IF AND WHERE DIRECTED	LF	50
38	PAVER DETECTABLE WARNING SURFACE	SY	5
39	PAVERS	SY	250
40	UTILITY COORDINATION	LS	LS
41	LANDSCAPE SURFACE TREATMENT	SY	250
42	REMOVABLE BOLLARDS	UNIT	4
43	BENCHES	UNIT	6
44	DECORATIVE FENCE	LF	500
45	BICYCLE RACKS	UNIT	2

ALTERNATE BID A			
ITEM	DESCRIPTION	UNITS	TOTAL
A1	PEDESTRIAN FOOTBRIDGE	LS	LS

ALTERNATE BID B			
ITEM	DESCRIPTION	UNITS	TOTAL
B1	GAZEBO STRUCTURE	LS	LS

ALTERNATE BID C			
ITEM	DESCRIPTION	UNITS	TOTAL
C1	TRASH RACK	UNITS	1

UTILITIES

- | | |
|---|---|
| Public Service Electirc & Gas Co.
48 Middle Avenue
Summit, NJ 07901 | Verizon
445 Georges Road
North Brunswick, NJ 08902 |
| Jersey Central Power and Light
300 Madison Avenue
Morristown, NJ 07960 | City of Summit
Division of Public Works
41 Chatham Road
Summit, NJ 07901 |
| Comcast Cablevision of New Jersey
300 Rahway Avenue 07901
Union, NJ 07083 | New Jersey American Water Co.
167 JFK Parkway
Short Hills, NJ 07078 |

Project Safety Note:

The contractor(s) working on the project are responsible to ensure that all safety regulations of the Occupational Safety and Health Administration (OSHA) and the requirements of the State of New Jersey Department of Labor and Industry shall be adhered to on this project and that he or she shall instruct his or her personnel to follow these regulations. These regulations include, but are not limited to, the regulations concerning Trench Excavation, Competent Persons and Confined Space Regulations.

INDEX OF SHEETS	
SHEET	DESCRIPTION
1	TITLE SHEET
2	EXISTING CONDITIONS AND DEMOLITION PLAN
3	CONSTRUCTION PLANS
4	LANDSCAPE PLAN
5	CULVERT RECONSTRUCTION PLAN
6	DETAILS SHEET
SHT 1-3	PED FOOTBRIDGE AND TRASH RACK

REVISIONS
DESCRIPTION

NO DATE

MEMORIAL FIELD
LANDSCAPE & CULVERT RENOVATION
TITLE PAGE

CITY OF SUMMIT UNION CO., N.J.
DIVISION OF ENGINEERING
DEPARTMENT OF COMMUNITY SERVICES
512 SPRINGFIELD AVENUE
SUMMIT NJ 07901
UNION COUNTY

Aaron J. Schrage
Professional Engineer
New Jersey Lic. No. 46143
City Engineer

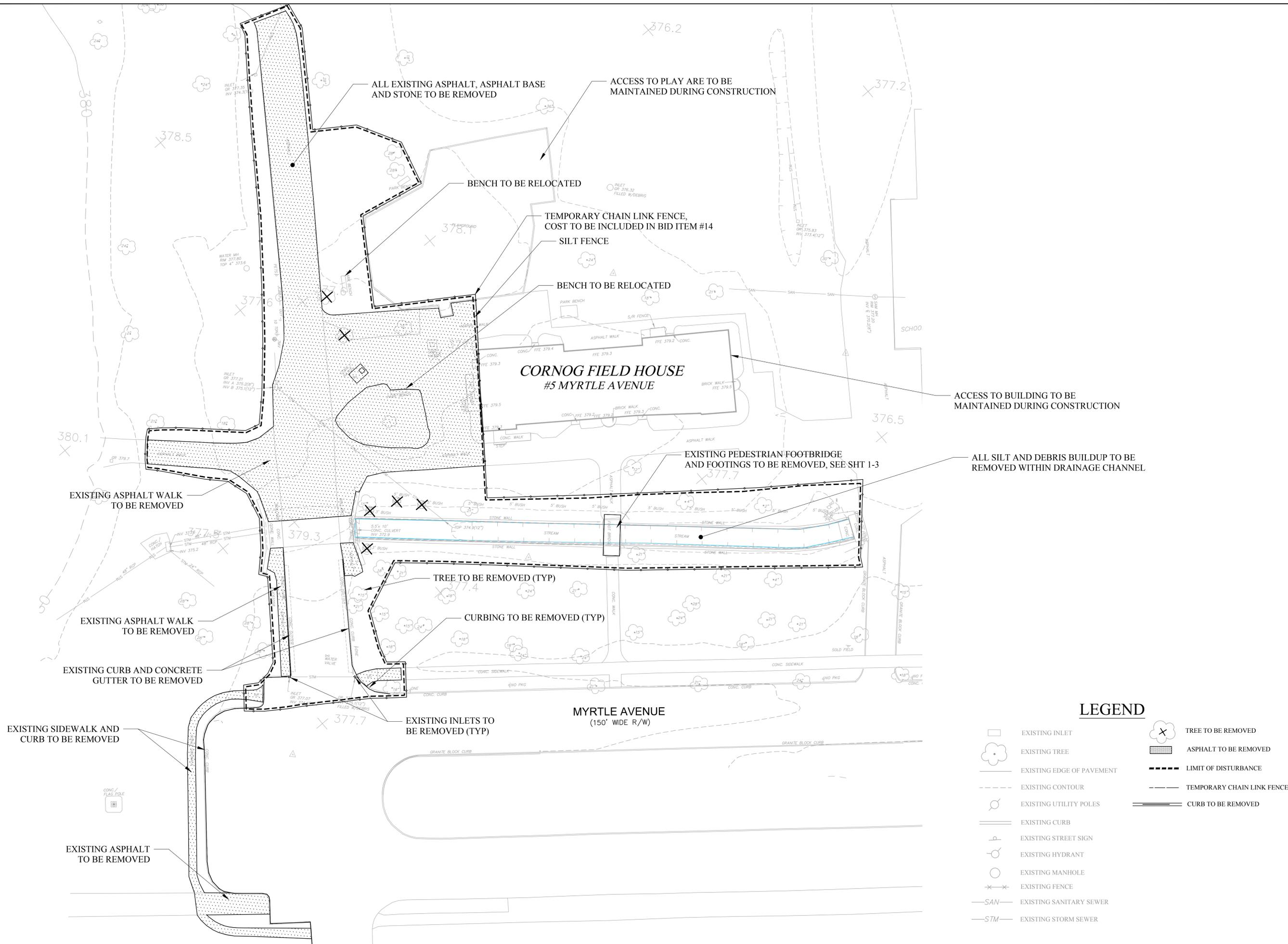


DATE:
9/1/2014

DRAWN
BY: RM

SCALE
1" = 20'

1 OF 6



LEGEND

- EXISTING INLET
- EXISTING TREE
- EXISTING EDGE OF PAVEMENT
- EXISTING CONTOUR
- EXISTING UTILITY POLES
- EXISTING CURB
- EXISTING STREET SIGN
- EXISTING HYDRANT
- EXISTING MANHOLE
- EXISTING FENCE
- EXISTING SANITARY SEWER
- EXISTING STORM SEWER
- TREE TO BE REMOVED
- ASPHALT TO BE REMOVED
- LIMIT OF DISTURBANCE
- TEMPORARY CHAIN LINK FENCE
- CURB TO BE REMOVED

NO.	DATE	REVISIONS	DESCRIPTION

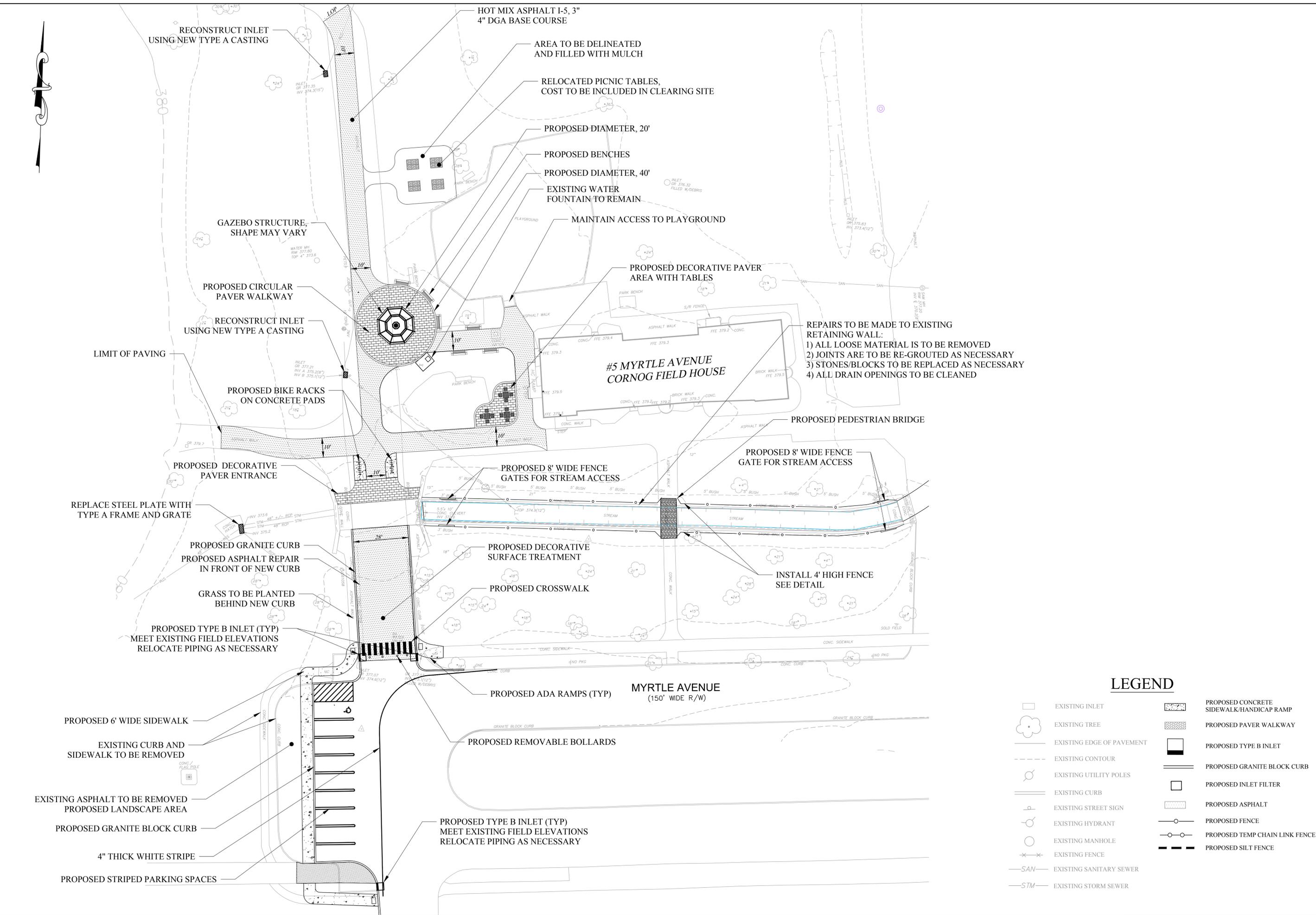
**MEMORIAL FIELD
LANDSCAPE & CULVERT RENOVATION
EXISTING CONDITIONS & DEMOLITION PLAN**

CITY OF SUMMIT UNION CO., N.J.
 DIVISION OF ENGINEERING
 DEPARTMENT OF COMMUNITY SERVICES
 512 SPRINGFIELD AVENUE
 SUMMIT NJ 07901
 UNION COUNTY

Aaron J. Schrage
 Professional Engineer
 New Jersey Lic. No. 46143
 City Engineer



DATE: 9/1/2014
DRAWN BY: RM
SCALE 1" = 20'
2 OF 6



LEGEND

- EXISTING INLET
- EXISTING TREE
- EXISTING EDGE OF PAVEMENT
- EXISTING CONTOUR
- EXISTING UTILITY POLES
- EXISTING CURB
- EXISTING STREET SIGN
- EXISTING HYDRANT
- EXISTING MANHOLE
- EXISTING FENCE
- SAN EXISTING SANITARY SEWER
- STM EXISTING STORM SEWER
- PROPOSED CONCRETE SIDEWALK/HANDICAP RAMP
- PROPOSED PAVER WALKWAY
- PROPOSED TYPE B INLET
- PROPOSED GRANITE BLOCK CURB
- PROPOSED INLET FILTER
- PROPOSED ASPHALT
- PROPOSED FENCE
- PROPOSED TEMP CHAIN LINK FENCE
- PROPOSED SILT FENCE

NO	DATE	REVISIONS	DESCRIPTION

**MEMORIAL FIELD
LANDSCAPE & CULVERT RENOVATION
CONSTRUCTION PLAN**

CITY OF SUMMIT UNION CO., N.J.
 DIVISION OF ENGINEERING
 DEPARTMENT OF COMMUNITY SERVICES
 515 SPRINGFIELD AVENUE
 SUMMIT, NJ 07901
 UNION COUNTY

Aaron J. Schragar
 Professional Engineer
 New Jersey Lic. No. 46143
 City Engineer



DATE:
9/1/2013

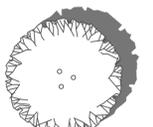
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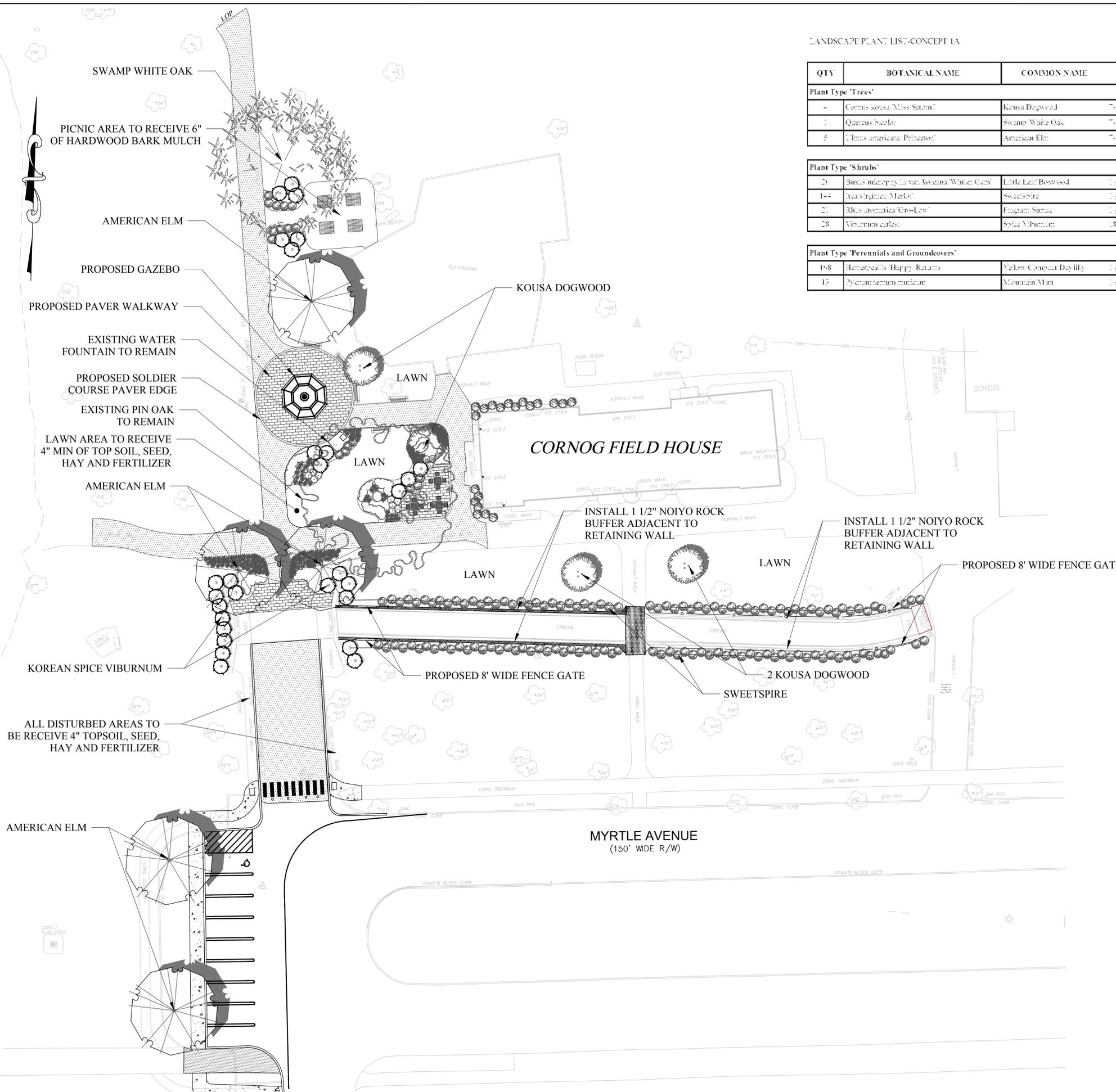
SCALE
1" = 20'

LANDSCAPE PLAN, LIST-CONCEPT 1A

QTY	BOTANICAL NAME	COMMON NAME	INSTALLED SIZE	REMARKS	SPACING	MATURE SIZE
Plant Type 'Trees'						
-	<i>Cornus kousa</i> 'Miss Satom'	Kousa Dogwood	7-8	B&B-full		20' H by 15' W
1	<i>Quercus bicolor</i>	Swamp White Oak	7-8	B&B-full		60' H by 60' W
5	<i>Ulmus americana</i> 'Princeton'	American Elm	7-8	B&B-full		60' H by 40' W
Plant Type 'Shrubs'						
2	<i>Buxus microphylla</i> var. <i>koreana</i> 'Winter Gem'	Little Leaf Boxwood	1 gal		1' oc	7' H by 4' W
1-4	<i>Itea virginica</i> 'Merlot'	Sweetspire	1 gal		1' oc	7' H by 4' W
2	<i>Rhus aromatica</i> 'Gro-Low'	Fragrant Sumac	1 gal		1' oc	1.5' H by 6' W
28	<i>Viburnum carlesii</i>	Spice Viburnum	1.8-2.4	#5 cont	1' oc	7' H by 6' W
Plant Type 'Perennials and Groundcovers'						
1-8	<i>Hemerocallis</i> 'Happy Returns'	Yellow Compact Daylily	1 gal	#1 Cont	2' oc	1.2' H by 1.5' W
15	<i>Pycnanthemum muticum</i>	Mountain Mint	1 gal		2' oc	7' H by 3' W

LANDSCAPE LEGEND

-  CORNUS KOUSA 'MISS SATOM' (KOUSA DOGWOOD)
-  QUERCUS BICOLOR (SWAMP WHITE OAK)
-  ULMUS AMERICANA 'PRINCETON' (AMERICAN ELM)
-  BUXUS MICROPHYLLA VAR. KOREANA 'WINTER GEM' (LITTLE LEAF BOXWOOD)
-  ITEA VIRGINICA 'MERLOT' (SWEETSPIRE)
-  RHUS AROMATICA 'GRO-LOW' (FRAGRANT SUMAC)
-  VIBURNUM CARLESII (KOREAN SPICE VIBURNUM)
-  HEMEROCALLIS 'HAPPY RETURNS' (YELLOW COMPACT DAYLILY)
-  PYCNANTHEMUM MUTICUM (MOUNTAIN MINT)
-  PARK BENCH



NO.	DATE	DESCRIPTION

**MEMORIAL FIELD
LANDSCAPE & CULVERT RENOVATION
LANDSCAPE PLAN**

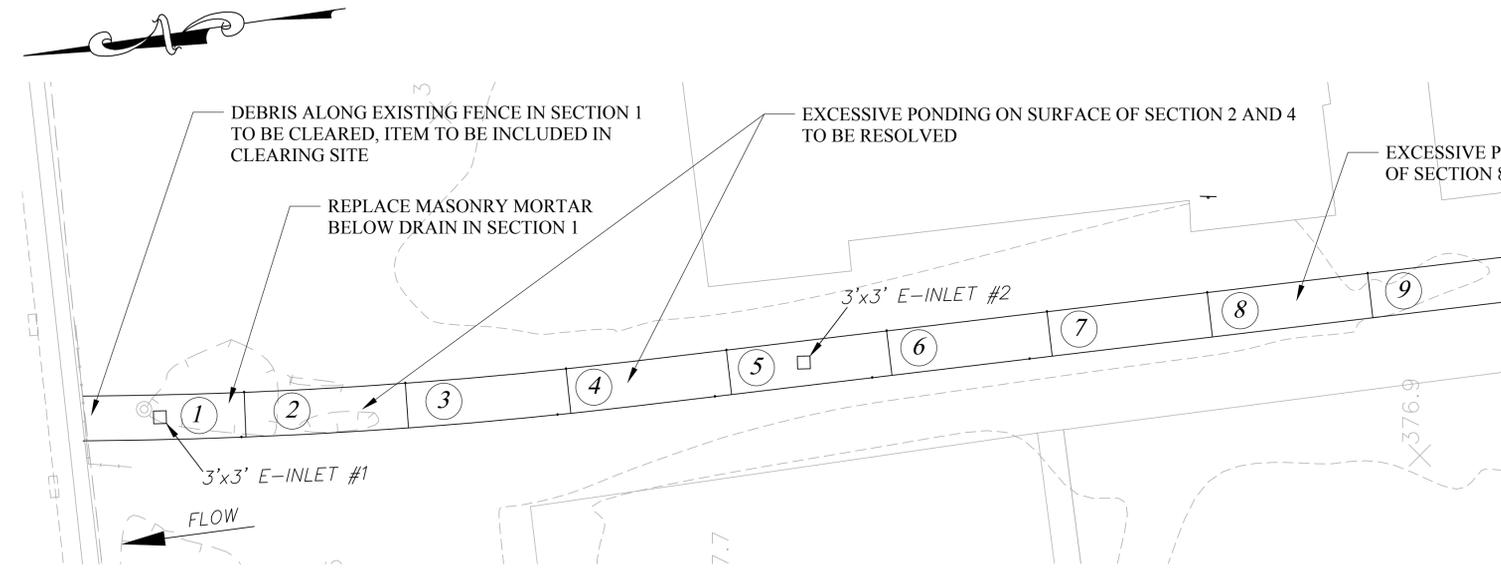
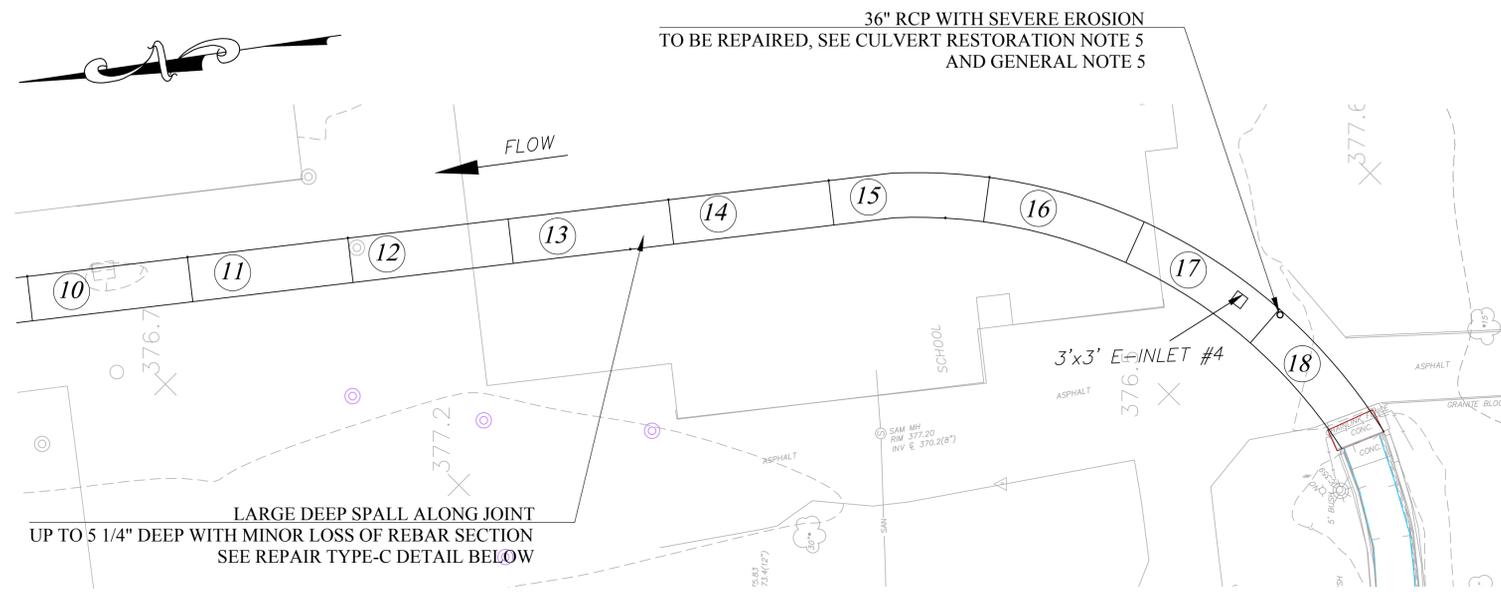
**CITY OF SUMMIT UNION CO., N.J.
DIVISION OF ENGINEERING
DEPARTMENT OF COMMUNITY SERVICES
512 SPRINGFIELD AVENUE
SUMMIT NJ 07901
UNION COUNTY**

Aaron J. Schrage
 Professional Engineer
 New Jersey Lic. No. 46143
 City Engineer



CITY OF SUMMIT
UNION COUNTY NEW JERSEY

DATE:
9/1/2013
 DRAWN
BY: RM
 SCALE
1" = 20'
 4 OF 6



GENERAL NOTES:

1. SPALLED, DELAMINATED, AND DETERIORATED CONCRETE AREAS SHALL BE CLEANED AND REPAIRED WITH THE CONCRETE OVERLAY TYPE THAT IS TO BE USED FOR THE OVERLAY PLACEMENT, OR CLASS A CONCRETE MAY BE USED.
2. REPAIR TYPE-B: ALL DETERIORATED AND DELAMINATED CONCRETE SHALL BE REMOVED TO A MINIMUM DEPTH OF 1" BELOW THE BOTTOM OF THE TOP LAYER OF EXISTING REINFORCEMENT STEEL TO A MAXIMUM OF 50% OF THE THICKNESS OF THE EXISTING CONCRETE DECK.
3. REPAIR TYPE-C: ALL DETERIORATED AND DELAMINATED CONCRETE SHALL BE REMOVED, AND IF THE SOUND CONCRETE SURFACE IS LOCATED AT A DEPTH GREATER THAN 50% OF THE DECK THICKNESS WHEN MEASURED FROM THE TOP OF THE DECK, PERFORM TYPE-C REPAIR UPON APPROVAL OF THE RE, AS SHOWN IN THE DETAIL "REPAIR TYPE-C". IF THE BOTTOM MAT OF THE DECK REINFORCEMENT STEEL IS EXPOSED, THE DECK SLAB SHALL BE REPLACED TO FULL DEPTH IN THIS AREA OF EXPOSURE.
4. THE TOP SURFACE OF THE CONCRETE FOR TYPE-B AND TYPE-C REPAIRS SHALL BE EVEN WITH THE ADJACENT TOP OF EXISTING DECK SLAB AND SHALL MAINTAIN THE EXISTING GRADES AND CROSS SLOPES.
5. NEW CORROSION PROTECTED REINFORCEMENT STEEL SHALL BE PLACED TO SUPPLEMENT AN EXISTING REINFORCEMENT STEEL WHEN AN EXISTING ONE HAS A SECTION LOSS OF 25% OR MORE OF THE ORIGINAL CROSS SECTION, AS DETERMINED BY THE RE, OR THE EXISTING REINFORCEMENT STEEL IS BROKEN. THE NEW ONE SHALL EXTEND 30 BAR DIAMETERS IN EACH DIRECTION FROM WHERE THE SECTION LOSS OR BREAK ENDS. MODIFY THE LIMITS OF THE REPAIR AREA TO MEET THE REINFORCEMENT STEEL SPLICE LAP REQUIREMENTS.
6. FOR REPAIR TYPE-B AND TYPE-C SOUND CONCRETE SHALL BE REMOVED TO A DEPTH OF 1" MINIMUM TO 1" MAXIMUM IN ALL DIRECTIONS, EXCEPT THAT THE MAXIMUM LIMIT MAY BE MODIFIED UPON APPROVAL OF THE RE.

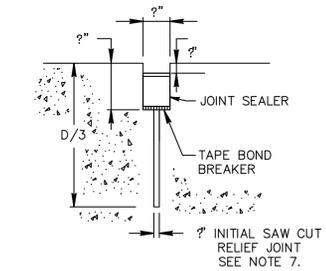
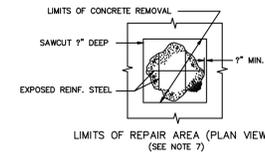
7. UPON APPROVAL OF THE RE, MODIFY THE LIMITS OF CONCRETE REMOVAL AS SHOWN IN THE "LIMITS OF REPAIR AREA (PLAN VIEW)" WHEN SUPPLEMENTARY REINFORCEMENT STEEL IS REQUIRED.
8. DECK REINFORCEMENT STEEL DETAILS SHOWN ARE GENERAL. ACTUAL REINFORCEMENT STEEL SPACINGS AND LOCATIONS WILL VARY FROM BRIDGE TO BRIDGE.
9. NEW REINFORCEMENT STEEL SHALL BE PLACED AT THE SAME LEVEL ALONGSIDE THE EXISTING DETERIORATED OR BROKEN REINFORCEMENT STEEL.
10. BEFORE PLACEMENT OF THE OVERLAY, ALL PREVIOUSLY PATCHED AREAS SHALL BE COMPLETELY REMOVED.

CULVERT ANALYSIS INFORMATION PREPARED BY BOSWELL ENGINEERING

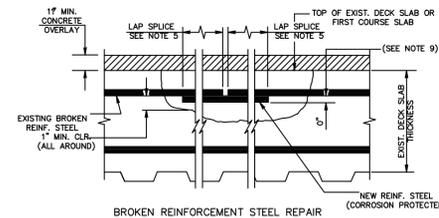
CULVERT RESTORATION NOTES:

1. SCALING OBSERVED AT THE EXPOSED TOP SURFACE OF THE ROOF SLABS BETWEEN SECTIONS 1 THROUGH 8 ARE TO BE REPAIRED. THE REPAIR MATERIAL IS TO BE GRADED TO AVOID STANDING WATER ON THE SURFACE.
2. FINE TRANSVERSE CRACKS ARE TO BE SEALED AND THE EXPANSION JOINTS ARE TO BE REPLACED. AFTER REPAIRING ALL CRACKS AND REPLACING THE JOINTS, THE ENTIRE SURFACE IS TO BE COATED WITH A PROTECTIVE WATER REPELLANT SEALANT. REFER TO NJ DOT SPECIFICATIONS SECTION 551.03-REPAIR OF CONCRETE DECK AND SECTION 552-PRESSURE INJECTION SEALING.
3. EXPANSION JOINTS TO BE REPAIRED. SEE DETAIL FOR TRANSVERSE EXPANSION JOINT AND CORRESPONDING DETAIL A (HOT-POURED JOINT SEALER).
3. DEEP SPALLING IN SECTIONS 13 AND 14 AS WELL AS SMALLER AREAS OF SPALLING ALONG THE CULVERT ARE TO BE REPAIRED WITH AN APPROPRIATE PATCH MATERIAL. DEEP SPALLING OF SECTIONS 13 AND 14 ARE TO BE CONSIDERED FULL DEPTH (TYPE-C) REPAIR. MINOR SPALLING IS TO BE CONSIDERED PARTIAL DEPTH (TYPE-B) REPAIR. SEE DETAILS.
4. MINOR LOSS OF REBAR SECTION IN SECTION 13 TO BE REPAIRED. SEE DETAIL FOR DETERIORATED AND/OR BROKEN REINFORCEMENT STEEL REPAIR.
5. STONE SIDEWALLS OF CULVERT ARE TO BE REPOINTED AS NECESSARY AT WEEPHOLE LOCATIONS. REPLACE MASONRY MORTAR IF AND WHERE DIRECTED.
6. THE END CONNECTION OF THE 36" RCP AT SECTION 18 TO BE REPAIRED TO PREVENT LOSS OF BACKFILL MATERIAL. APPLY MORTAR TO AREA SURROUNDING PIPE END. REPLACE EXISTING STEEL REINFORCEMENT AT PIPE END.
7. ALL CULVERT WORK TO BE COORDINATED WITH BRAYTON SCHOOL.
8. CULVERT WORK ZONES TO BE FULLY PROTECTED DURING CONSTRUCTION AND CURING.
9. NO EQUIPMENT OR MATERIAL SHALL BE STORED ADJACENT TO SCHOOL OR PLAYGROUND AREAS.

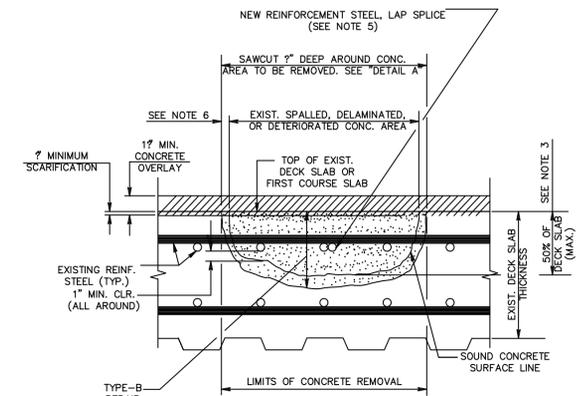
CULVERT ANALYSIS INFORMATION PREPARED BY BOSWELL ENGINEERING



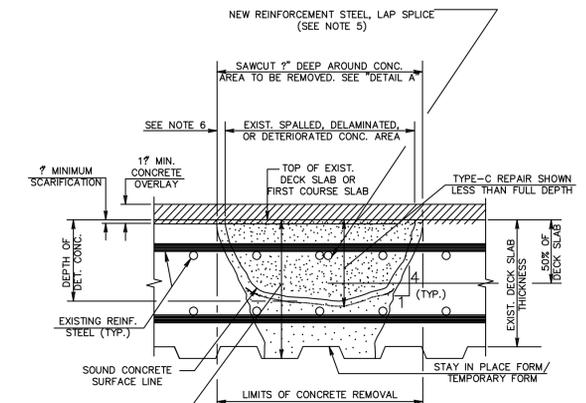
**DETAIL A
HOT-POURED JOINT SEALER**



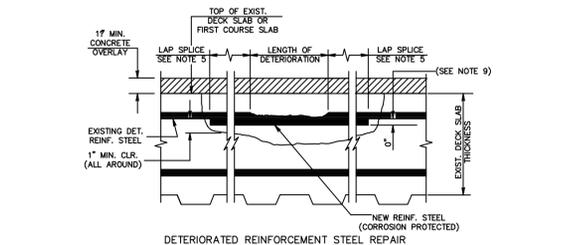
BROKEN REINFORCEMENT STEEL REPAIR



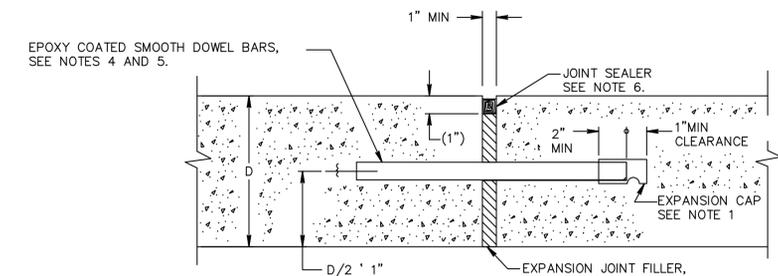
**REPAIR TYPE-B
(SEE NOTE 2)**



**REPAIR TYPE-C
(SEE NOTE 3)**



DETERIORATED REINFORCEMENT STEEL REPAIR



TRANSVERSE EXPANSION JOINT

NO.	DATE	REVISIONS	DESCRIPTION

**MEMORIAL FIELD
LANDSCAPE & CULVERT RENOVATION
CULVERT RECONSTRUCTION PLAN**

CITY OF SUMMIT UNION CO., N.J.
DIVISION OF ENGINEERING
DEPARTMENT OF COMMUNITY SERVICES
512 SPRINGFIELD AVENUE
SUMMIT NJ 07901
UNION COUNTY

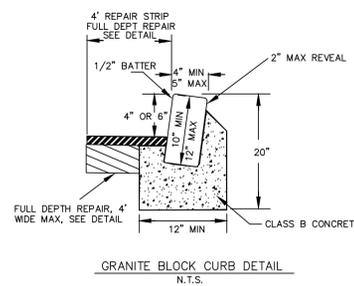
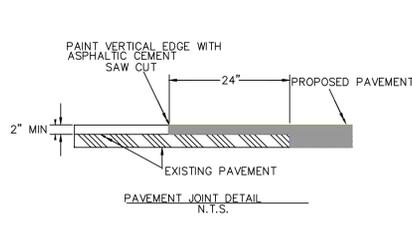
Aaron J. Schragar
Professional Engineer
New Jersey Lic. No. 46143
City Engineer



DATE:
9/1/2013

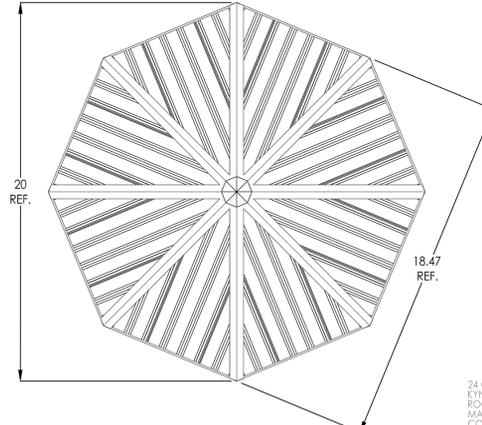
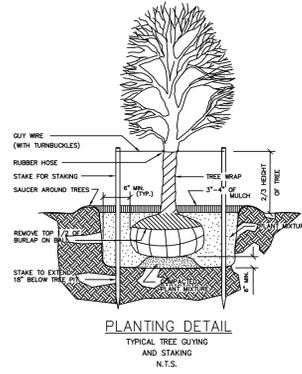
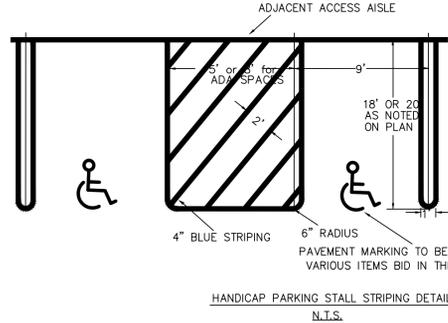
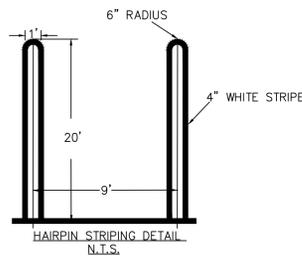
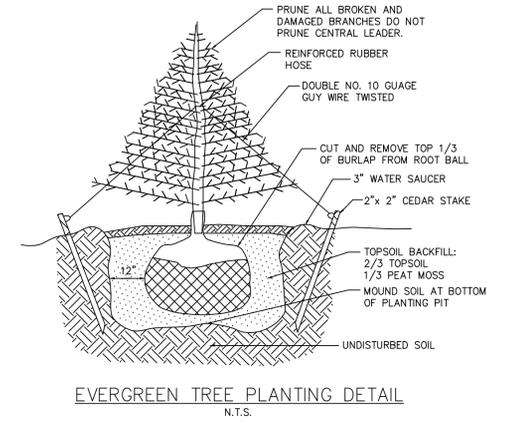
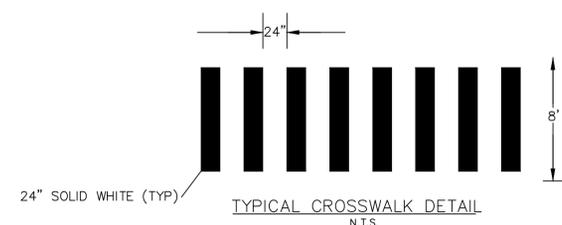
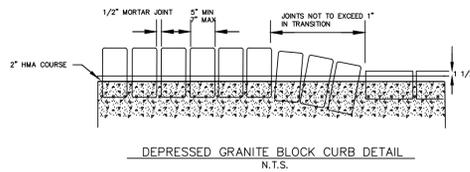
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SCALE
1" = 20'



CURB NOTES

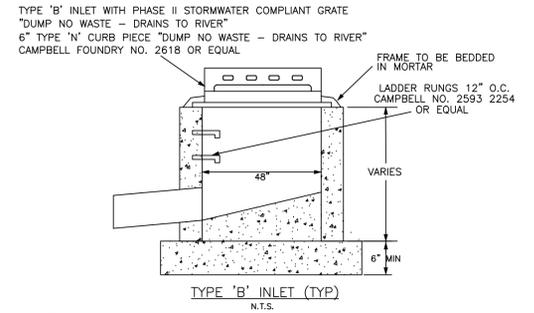
- 1) 4" THICK, COARSE AGGREGATE SIZE NO. 57 SHALL BE CONSTRUCTED UNDERNEATH PROPOSED CURB IN WET FIELD CONDITIONS AS DIRECTED BY THE ENGINEER. ALL COSTS FOR 4" THICK, COARSE AGGREGATE SIZE NO. 57 SHALL BE INCLUDED IN THE VARIOUS ITEMS BID IN THE PROJECT.
- 2) TOP OF CURB SHALL NOT BE SET HIGHER THAN ADJACENT EXISTING OR PROPOSED SIDEWALK UNDER ANY CONDITION.
- 3) FULL DEPTH REPAIR TO BE CONSTRUCTED ALONG THE ROAD EDGE OF NEW CURB UP TO 4' WIDE. COST TO BE INCLUDED IN PRICE OF CURB. SEE FULL DEPTH REPAIR DETAIL.



24 GA. GALVALUME COATED, KYNAR 500 PAINTED, STEEL ROOFING PANELS. SEE COLOR MATRIX FOR AVAILABLE COLORS.

THIS SHELTER PROVIDES 283 SQ. FT. OF SHADE.

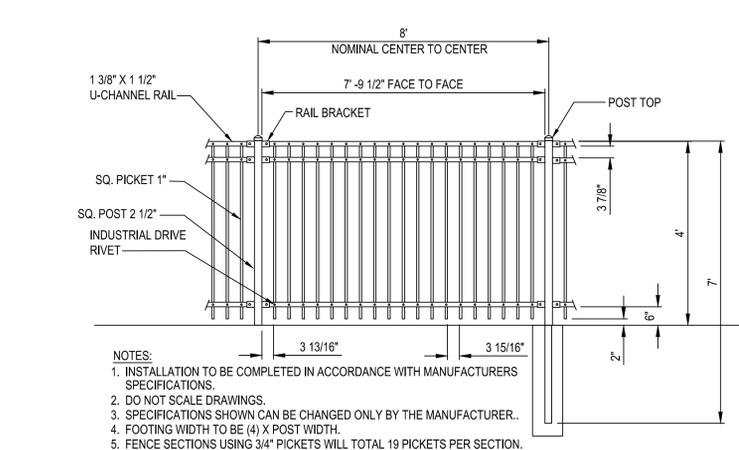
GAZEBO MANUFACTURED BY POLIGON OR APPROVED EQUAL.



TYPE 'B' INLET WITH PHASE II STORMWATER COMPLIANT GRATE "DUMP NO WASTE - DRAINS TO RIVER"

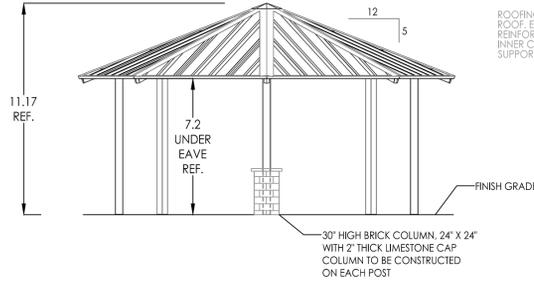
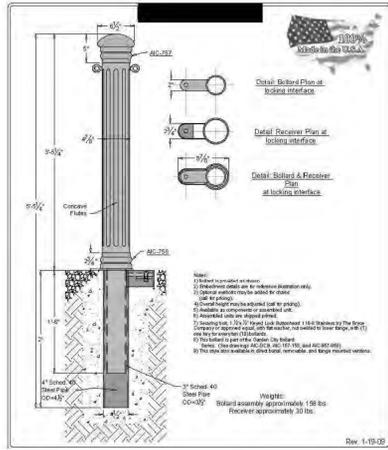
6" TYPE 'N' CURB PIECE "DUMP NO WASTE - DRAINS TO RIVER" CAMPBELL FOUNDRY NO. 2618 OR EQUAL

NOTE:
 1) ALL PIPES ARE TO BE CUT FLUSH WITH BASIN WALL.
 2) COST FOR FRAME AND GRATE ARE INCLUDED IN THE BID PRICE FOR THE BASIN.
 3) SHOP DRAWINGS MUST BE SUBMITTED BY A NEW JERSEY PROFESSIONALLY LICENSED ENGINEER FOR ALL PROPOSED PRECAST INLETS THREE (3) WEEKS PRIOR TO CONSTRUCTION. SHOP DRAWINGS ARE SUBJECT TO THE APPROVAL OF THE CITY ENGINEER.
 4) GRATE MUST BE BICYCLE SAFE.

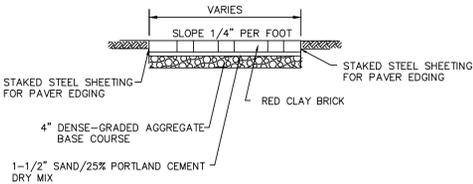


NOTES:

1. INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURERS SPECIFICATIONS.
2. DO NOT SCALE DRAWINGS.
3. SPECIFICATIONS SHOWN CAN BE CHANGED ONLY BY THE MANUFACTURER.
4. FOOTING WIDTH TO BE (4) X POST WIDTH.
5. FENCE SECTIONS USING 3/4" PICKETS WILL TOTAL 19 PICKETS PER SECTION. FENCE SECTIONS USING 1" PICKETS WILL TOTAL 18 PICKETS PER SECTION.



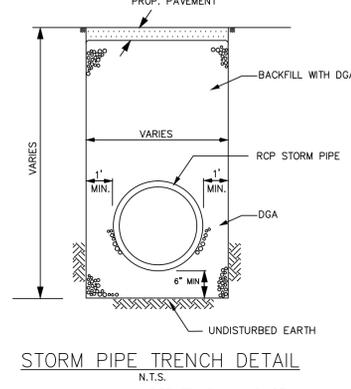
GAZEBO DETAIL N.T.S.



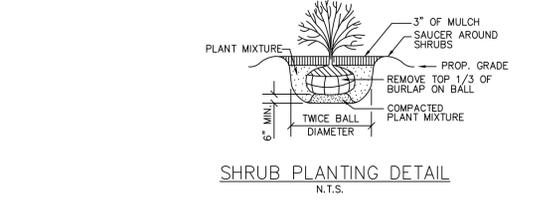
NOTE: LEAVE 3-1/4" FROM TOP OF SAND TO FINISH GRADE. PLACE BRICK, TAMP AND VIBRATE BLOCK TO FINISH GRADE. NO GROUT OR DRY MIX TO BE PLACED BETWEEN BLOCKS.

RED CLAY BRICK SHALL BE COMMERCIAL GRADE MEETING US ASTM STANDARDS FOR STRENGTH AND SIZE. SAMPLES MUST BE SUBMITTED FOR APPROVAL PRIOR TO CONSTRUCTION.

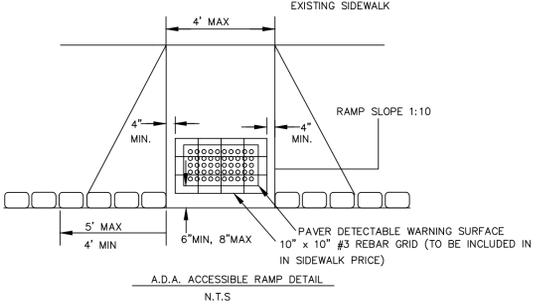
RED CLAY BRICK PAVER DETAIL N.T.S.



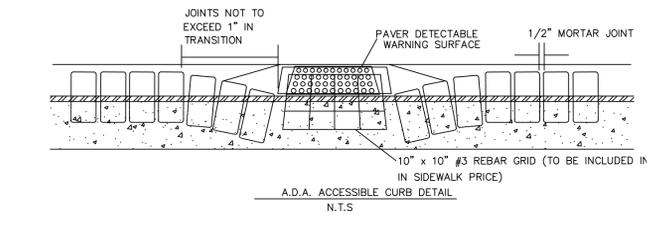
STORM PIPE TRENCH DETAIL N.T.S.



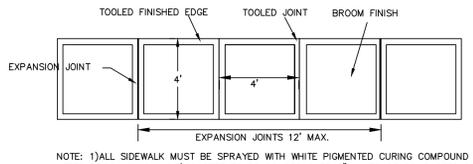
SHRUB PLANTING DETAIL N.T.S.



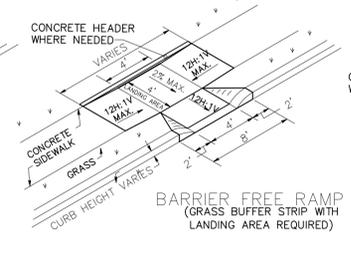
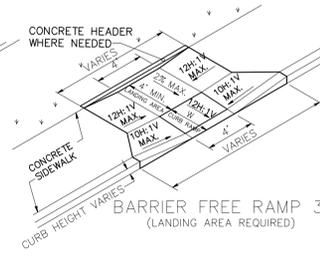
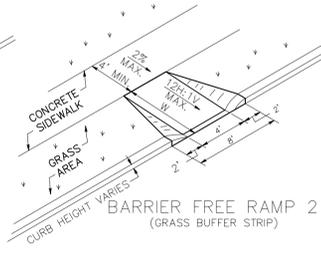
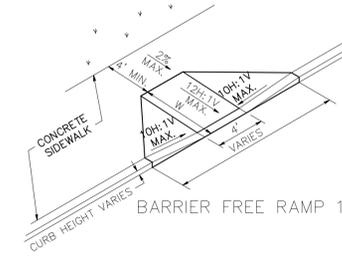
A.D.A. ACCESSIBLE RAMP DETAIL N.T.S.



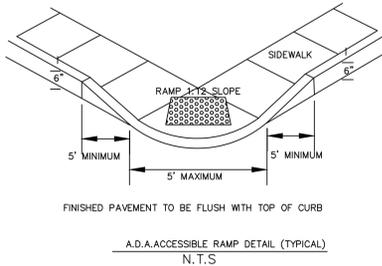
A.D.A. ACCESSIBLE CURB DETAIL N.T.S.



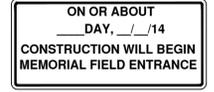
CONCRETE SIDEWALK DETAIL N.T.S.



A.D.A. ACCESSIBLE BARRIER FREE RAMP DETAILS N.T.S.

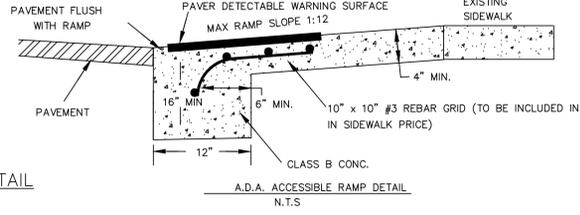


A.D.A. ACCESSIBLE RAMP DETAIL (TYPICAL) N.T.S.



NOTE: THE CONTRACTOR SHALL MOUNT THE SIGN IN ACCORDANCE WITH NDOT 2007 STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.

CONSTRUCTION IDENTIFICATION SIGN DETAIL N.T.S.



A.D.A. ACCESSIBLE RAMP DETAIL N.T.S.

NO	DATE	REVISIONS	DESCRIPTION

MEMORIAL FIELD LANDSCAPE & CULTIVERT RENOVATION DETAILS

CITY OF SUMMIT UNION CO., N.J.
 DIVISION OF ENGINEERING
 DEPARTMENT OF COMMUNITY SERVICES
 512 SPRINGFIELD AVENUE
 SUMMIT NJ 07901
 UNION COUNTY

Aaron J. Schrage
 Professional Engineer
 New Jersey Lic. No. 46143
 City Engineer

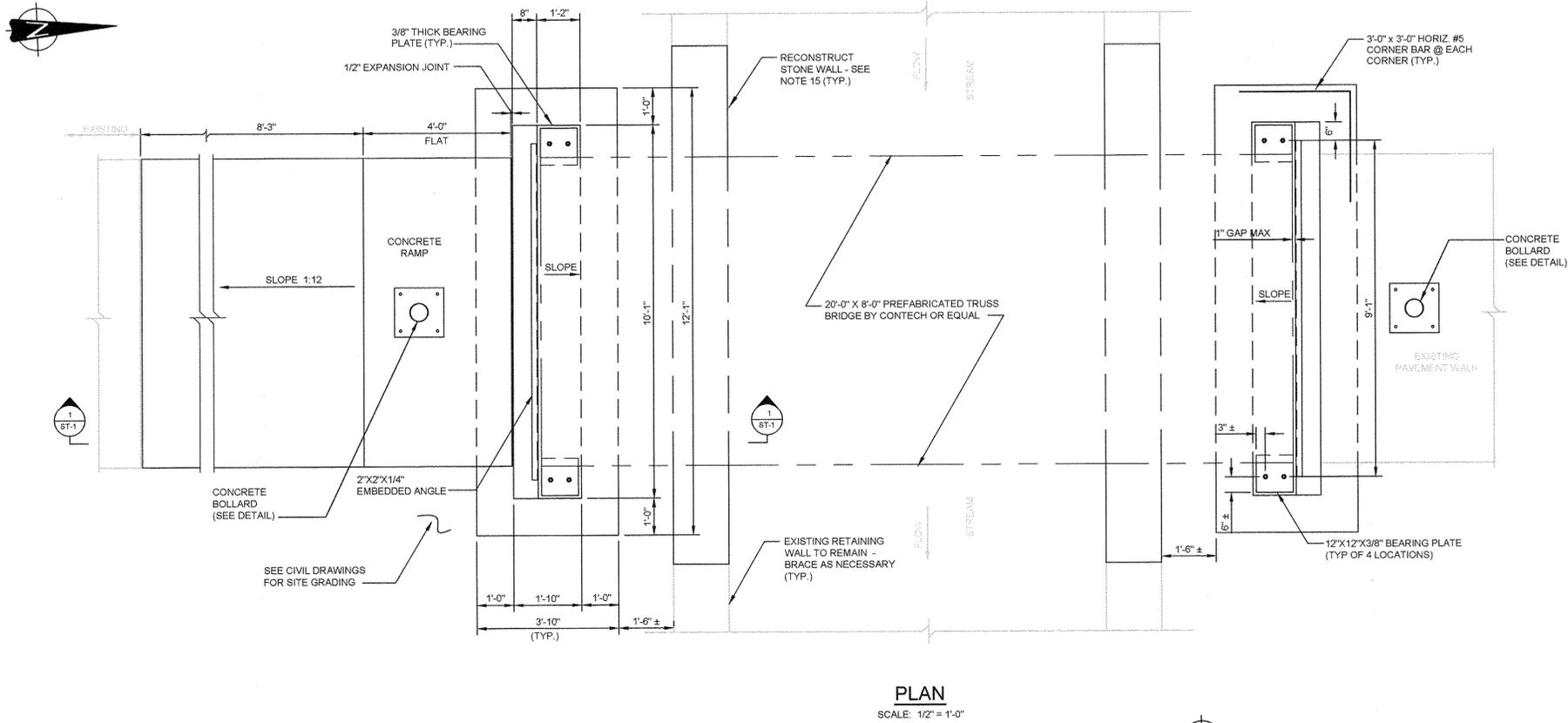


DATE: 9/1/2013

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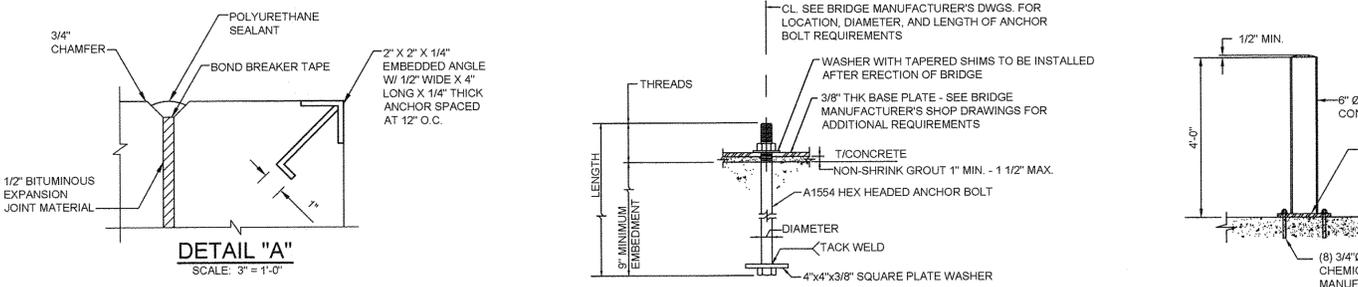
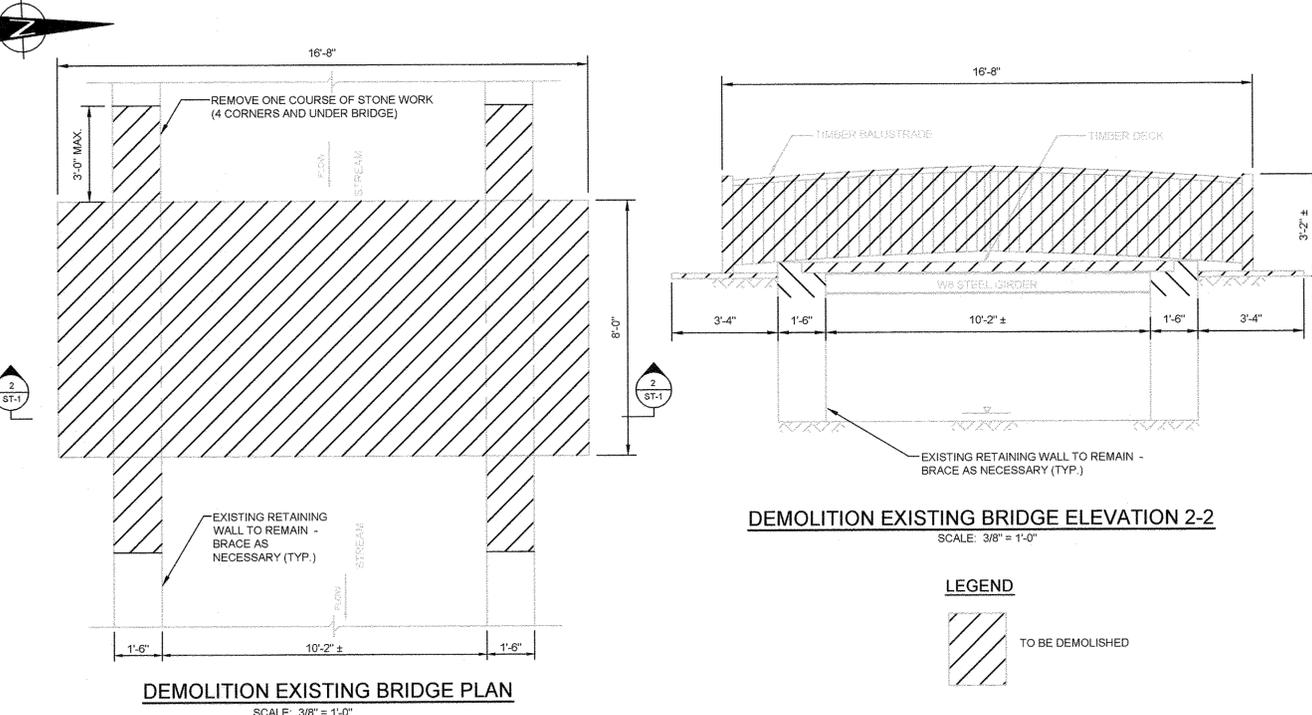
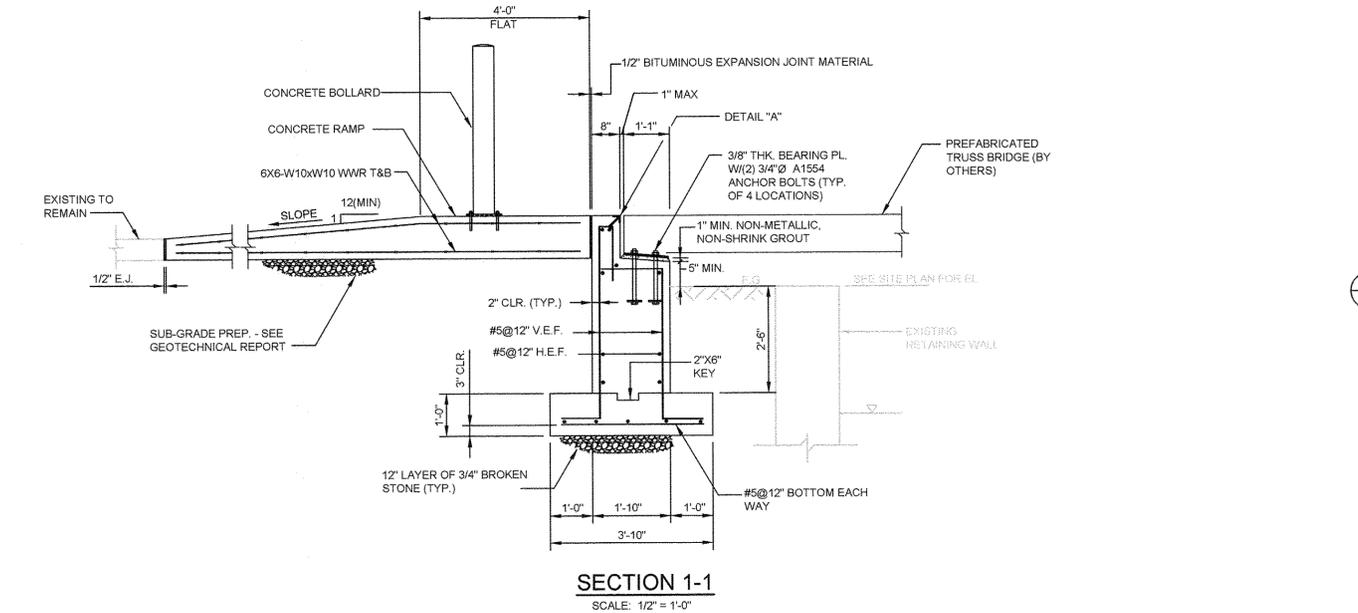
SCALE 1" = 20'

I:\DEPARTMENTAL ADMINISTRATIVE\PROJECTS\DESIGN\2023\48- SALT BROOK MEMORIAL FIELD RENOVATIONS\TRASH RACK 1 - MYRTLE AVENUE ST-8 - PED BRIDGE.DWG 9/18/2014 2:25:09 PM

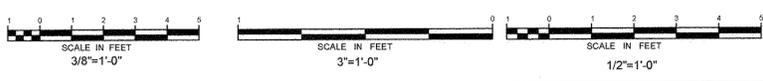


GENERAL NOTES

- ANCHOR BOLTS AND BEARING PLATES SHOWN ARE BASED ON THE FOLLOWING PRELIMINARY DESIGN REACTIONS. SHOULD ACTUAL DESIGN REACTIONS EXCEED PRELIMINARY, CONTRACTOR SHALL PROVIDE SIGNED AND SEALED CALCULATION BY A LICENSED PROFESSIONAL ENGINEER IN THE STATE OF NEW JERSEY.
BRIDGE REACTIONS:
VERTICAL = 18.1 K
TRANSVERSE = 2.7 K
LONGITUDINAL = 1.2 K
- TRUSS BRIDGE SHALL BE CONTINENTAL CONNECTOR BRIDGE BY CONTECH, OR EQUAL.
- CARE SHALL BE TAKEN WHEN EXCAVATING AND BACK FILLING ADJACENT TO EXISTING STONE RETAINING WALL.
- SEE CIVIL PLAN FOR BRIDGE LOCATION.
- ANCHOR BOLTS SHALL BE CAST IN AND SET WITH A TEMPLATE.
- EXISTING PAVEMENT ON NORTHERN SIDE OF NORTH ABUTMENT WALL REQUIRE REMOVAL AND RECONSTRUCTION. LIMITS ARE TO BE WITHIN 2'-0" OF FOUNDATION EXCAVATION. SEE CIVIL DRAWINGS FOR LIMITS OF REMOVAL AND REPAIR.
- ALL SITE SUB-GRADE PREPARATIONS SHALL BE AS PER THE GEOTECHNICAL REPORT BY HATCH MOTT MACDONALD, DATED JANUARY 3RD, 2014.
- SHOULD ANY CONDITIONS BE ENCOUNTERED NOT ANTICIPATED OR INCONSISTENT WITH THE INTENT OF THESE DRAWINGS, THE ENGINEER SHALL BE NOTIFIED BEFORE PROCEEDING.
- CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS OF EXISTING STRUCTURES PRIOR TO CONSTRUCTION. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER.
- DUE CARE SHALL BE TAKEN TO ENSURE NO EXISTING STRUCTURE THAT IS TO REMAIN IS DAMAGED IN ANY WAY DURING DEMOLITION/CONSTRUCTION ACTIVITIES. ANY DAMAGE TO EXISTING ITEMS TO REMAIN SHALL BE REPAIRED/REPLACED AT CONTRACTORS EXPENSE.
- ALL MATERIALS RESULTING FROM DEMOLITION AND SITE PREPARATION ACTIVITIES SHALL BE REMOVED FROM THE PROJECT SITE AND DISPOSED OF AT AN APPROVED FACILITY.
- THE STRUCTURAL DESIGN OF THIS PROJECT IS BASED UPON APPROPRIATE PORTIONS OF THE FOLLOWING:
A) AASHTO LRFD GUIDE SPECIFICATIONS FOR THE DESIGN OF PEDESTRIAN BRIDGES
B) AASHTO STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES, AND TRAFFIC SIGNALS
C) AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS
- DESIGN PARAMETERS:
A) DEAD LOADS:
PRELIMINARY WEIGHT OF BRIDGE
WEIGHT OF SOIL - 125 PCF
B) LIVE LOADS:
BRIDGE PEDESTRIAN LOAD: 90 PSF
VEHICLE LIVE LOAD: H6 SINGLE TRUCK LOADING
C) WIND LOADS:
WIND LOAD: 35 PSF
WIND UPLIFT: 20 PSF
BASIC WIND SPEED: 100 MPH
WIND IMPORTANCE FACTOR, I = 1.15
D) BEARING PRESSURE
q = 3000 PSF
- PREFABRICATED TRUSS BRIDGE TO HAVE MAXIMUM DISTANCE BETWEEN BRIDGE DECK AND BOTTOM CHORD EQUAL TO EIGHT INCHES (8") AND SHALL HAVE OPEN GUARDRAILS. CONTRACTOR TO COORDINATE TYPE AND STYLE OF BRIDGE WITH OWNER.
- WHERE EXISTING BRIDGE REMOVAL CAUSES DAMAGE TO EXISTING STONE WALL, STONE WALL SHALL BE REPAIRED IN KIND. REPAIR WORK TO STONE WALL SHALL BE SUCH THAT THE TOP OF THE WALL SHALL BE LEVEL AND CONTINUOUS WITH EXISTING WALL.
- A SIGN ON EACH END SHALL BE POSTED ON THE BRIDGE INDICATING MAX ALLOWABLE LOAD.



TO BE USED GENERALLY THROUGHOUT FOR ANCHORING STRUCTURAL STEEL
TYP. DETAILS FOR STRUCTURAL STEEL ANCHOR BOLTS
NOT TO SCALE



Hatch Mott MacDonald
Professional Engineer - N.J. Lic. No. 66511740
111 Wood Avenue South
Iselin, New Jersey 08830-4112
Certificate No. 24GA38016800

JOSEPH C. CARUSO
Professional Engineer - N.J. Lic. No. 66511740
Date: 09/18/14

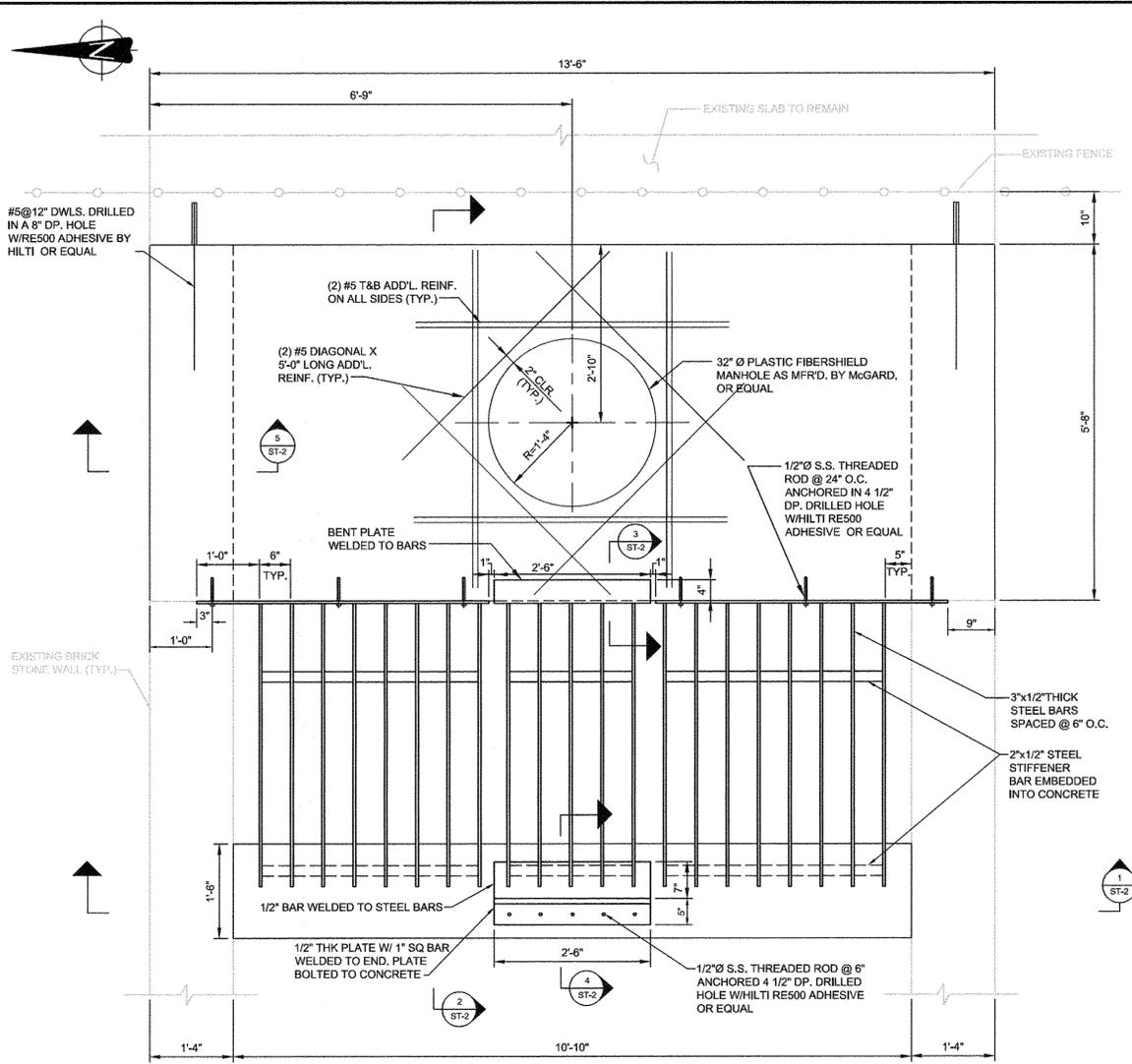
Designed: K/JW
Drawn: CLT
Checked: JCC
Approved: JCC
Date

CITY OF SUMMIT
SUMMIT, NEW JERSEY
**MEMORIAL FIELD RENOVATIONS
PEDESTRIAN BRIDGE**
PLAN, SECTIONS AND DETAILS

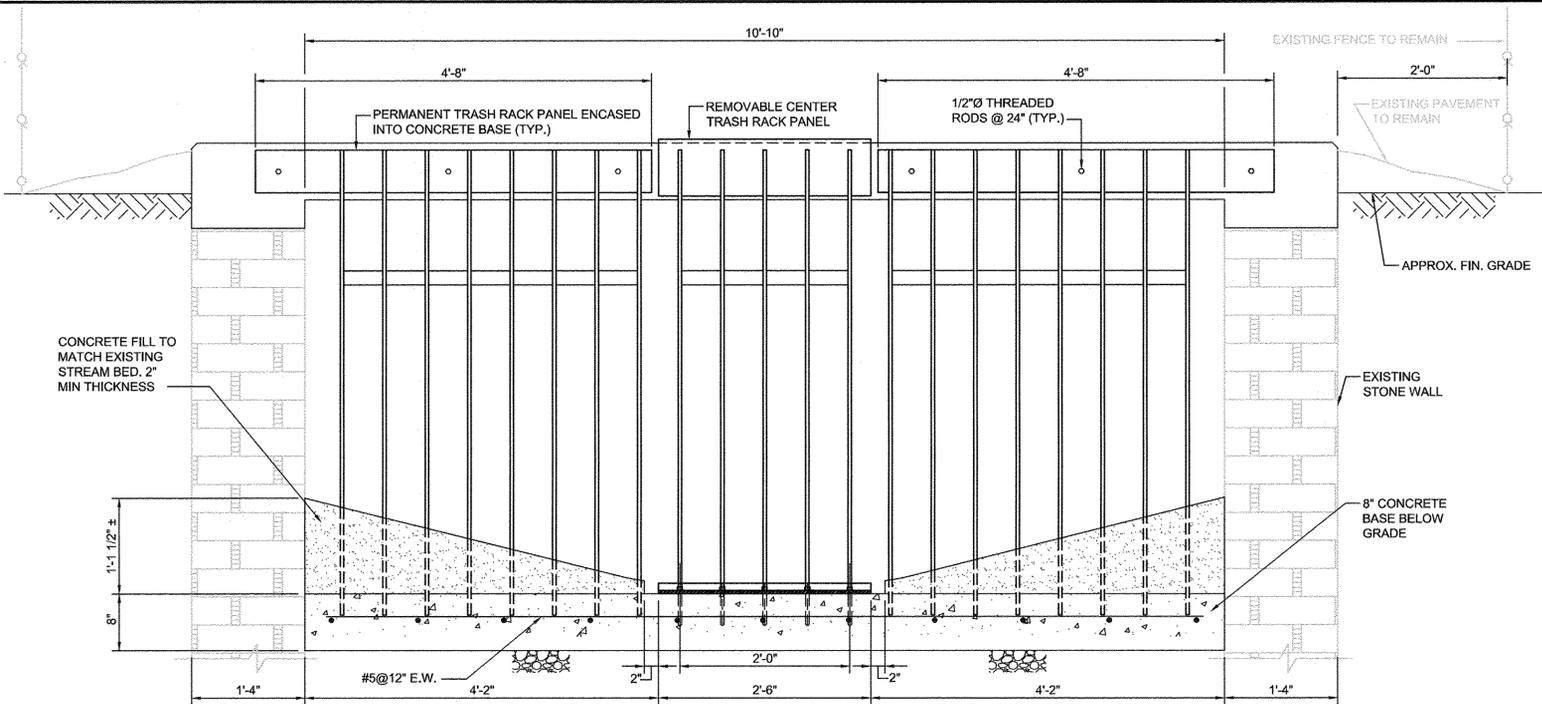
Job No.	ST-1
326346	
B/O	Total

Contract No.

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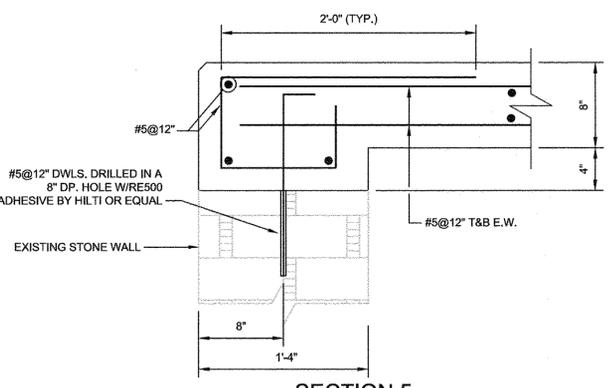


TRASH RACK PLAN
SCALE: 3/4" = 1'-0"

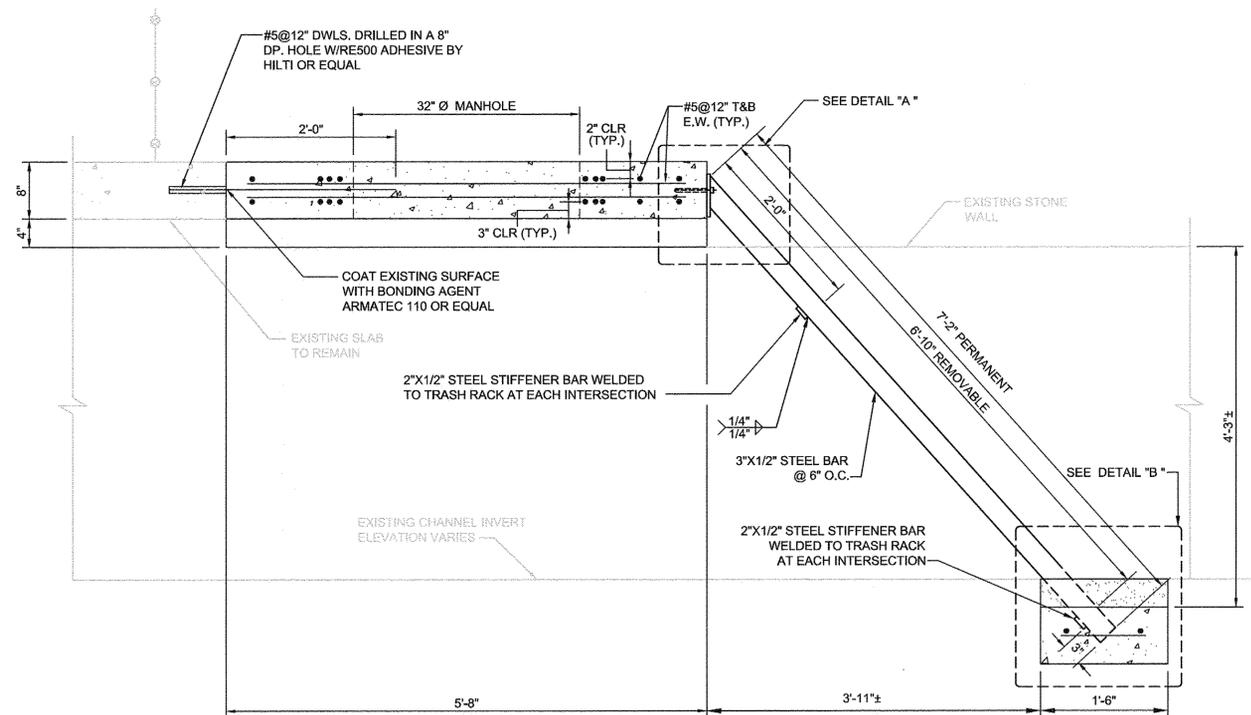


SECTION 1
SCALE: 1" = 1'-0"

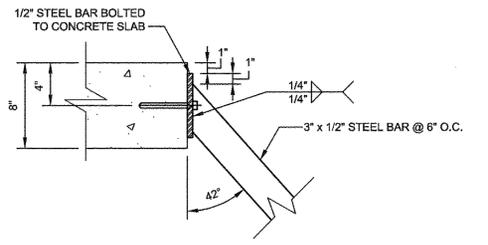
- DESIGN LOADS CRITERIA & NOTES:**
- LIVE LOADS ON SLAB: 100 PSF
 - STREAM LOADS:
CONCENTRATED: 1000 LB HORIZONTAL @ MIDPOINT
UNIFORM: 225 PLF
 - SNOW LOADS: 30 PSF
 - BENT PLATES MAY BE SUBSTITUTED WITH WELDED BARS
 - THE BASE SLAB SHALL BE CAST IN DRY CONDITIONS. A CONSTRUCTION JOINT MAY BE PROVIDED @ 4'-2" FROM EACH END.
 - DEBRIS WITHIN THE STREAM BED, UPSTREAM OF THE TRASH RACK SHALL BE REMOVED AND DISPOSED OF. STREAM BED SHALL BE RESTORED TO ORIGINAL STATE. LIMITS SHALL BE 25' UPSTREAM OF THE FACE OF THE CONCRETE BASE.
 - SEE STRUCTURAL NOTE ON DRAWING ST-3 FOR TYPE OF STEEL TO BE USED.



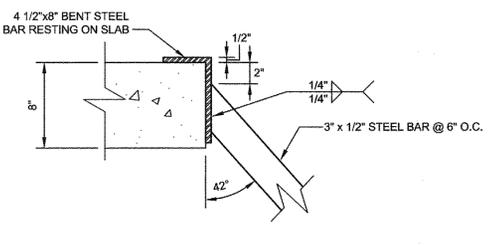
SECTION 5
SCALE: 1 1/2" = 1'-0"



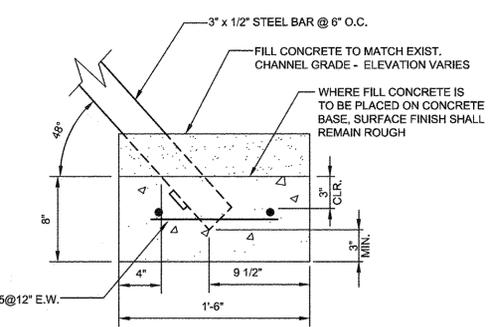
SECTION 2
SCALE: 1" = 1'-0"



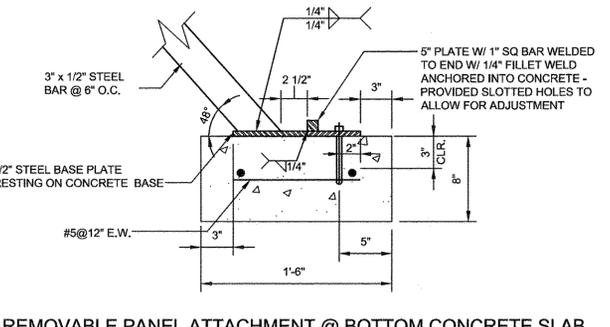
PERMANENT PANEL ATTACHMENT @ TOP CONCRETE SLAB
DETAIL A
SCALE: 1 1/2" = 1'-0"



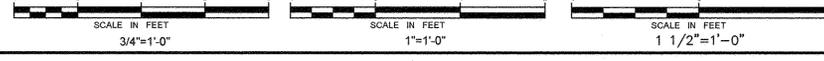
REMOVABLE PANEL ATTACHMENT @ TOP CONCRETE SLAB
SECTION 3
SCALE: 1 1/2" = 1'-0"



PERMANENT PANEL ATTACHMENT @ CONCRETE BASE SLAB
DETAIL B
SCALE: 1 1/2" = 1'-0"



REMOVABLE PANEL ATTACHMENT @ BOTTOM CONCRETE SLAB
SECTION 4
SCALE: 1 1/2" = 1'-0"



<p>Hatch Mott MacDonald Certificate No. 24CA28016600 111 Wood Avenue South Iselin, New Jersey 08830-4112</p>		<p>JOSEPH C. CARUSO Professional Engineer - N.J. Lic. No. 065017140</p>	<p>Date: 9/18/14 Approved: JCC Checked: JCC Drawn: MJP/CLT Designed: MJP</p>
<p>CITY OF SUMMIT SUMMIT, NEW JERSEY</p>	<p>MEMORIAL FIELD RENOVATIONS MYRTLE AVENUE TRASH RACK</p>		
<p>PLAN, SECTIONS AND DETAILS</p>			
<p>Job: 326346</p>	<p>No. ST-2</p>		
<p>B/O</p>	<p>Total</p>		
<p>Contract No. -</p>			

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GENERAL STRUCTURAL NOTES

- THE STRUCTURAL DESIGN OF THIS PROJECT IS BASED UPON APPROPRIATE PORTIONS OF THE FOLLOWING:
A) AMERICAN CONCRETE INSTITUTE "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE" ACI 318-08.
B) AISC "STEEL CONSTRUCTION MANUAL" - THIRTEENTH EDITION 2005.
- THE CONTRACTOR IS RESPONSIBLE FOR AND SHALL VERIFY AND COORDINATE ALL DIMENSIONS AND DETAILS CONCERNING THE WORK BEFORE PROCEEDING. ANY DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE ENGINEER. THE CONTRACTOR SHALL VERIFY THE ELEVATIONS OF THE EXISTING STRUCTURES AND CLEARANCES TO NEW CONSTRUCTION.
- DETAILS SHOWN IN ANY SECTION APPLY TO ALL SIMILAR SECTIONS UNLESS OTHERWISE NOTED.
- THE CONTRACTOR SHALL FULLY BRACE AND OTHERWISE PROTECT THE WORK IN PROGRESS UNTIL THE STRUCTURE IS COMPLETED.
- THE CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS AND LOCATE ALL EXISTING UNDERGROUND UTILITIES AND LINES AS NEEDED BEFORE COMMENCING CONSTRUCTION.
- THE CONTRACTOR SHALL PROVIDE, INSTALL AND MAINTAIN A COMPLETE SYSTEM FOR DIVERTING THE STREAM AND DEWATERING THE CONSTRUCTION SITE AS REQUIRED TO PROPERLY CONSTRUCT ALL STRUCTURES IN THE DRY. SUCH PROCEDURES SHALL AVOID DISTURBANCE OF THE SOIL STRUCTURE.
- CARE SHALL BE TAKEN WHEN EXCAVATING AND BACKFILLING BEHIND EXISTING RETAINING WALL.
- EXPANSION JOINT MATERIAL TO BE BITUMINOUS PREFORMED COMPRESSIBLE JOINT FILLER.

ADHESIVE ANCHORING SYSTEMS

- USE AN EPOXY ADHESIVE SUCH AS RE500 MANUFACTURED BY HILTI, OR APPROVED EQUAL.
- DIAMETER OF HOLE SHALL BE AS RECOMMENDED BY MANUFACTURER FOR THE PARTICULAR PRODUCT SPECIFIED IN THE DRAWINGS.
- POST INSTALLED ANCHORED THREADED RODS AND REBARS SHALL BE TESTED AFTER INSTALLATION. A MINIMUM OF 10% OF EACH DAYS APPLICATIONS AND NO LESS THAN 2 SHALL BE TESTED BY APPLYING A TENSION LOAD 2 TIMES THE MANUFACTURERS ALLOWABLE LOAD TO THE EMBEDDED ANCHOR. IF A TEST APPLICATION FAILS, ALL INSTALLATION FOR THAT DAY SHALL BE TESTED. TESTING PROCEDURES AND RESULTS SHALL BE SUBMITTED AND APPROVED BY THE ENGINEER. COST FOR TESTING SHALL BE INCLUDED.

CAST-IN-PLACE CONCRETE NOTES

- ALL REINFORCED CAST-IN-PLACE CONCRETE CONSTRUCTION SHALL CONFORM TO "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE" (ACI STANDARD 318-08), "ACI DETAILING MANUAL" (ACI PUBLICATION SP 66-04), EXCEPT AS SPECIFICALLY MODIFIED BY THE CONTRACT DRAWINGS.
- ALL REINFORCED CONCRETE SHALL BE AIR ENTRAINED (6%±1%), HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 4,500 PSI, A MINIMUM TYPE III CEMENT CONTENT OF 840 LBS. PER CUBIC YARD, AND A W/C RATIO OF 0.42 MAX. SLUMP SHALL BE 4"± 1". NON-REINFORCED CONCRETE SHALL HAVE A 28 DAY STRENGTH OF 3000 PSI.
- ALL REINFORCING STEEL SHALL HAVE A MINIMUM YIELD STRENGTH, $F_y = 60$ KSI AND SHALL BE NEW DOMESTIC DEFORMED BILLET-STEEL CONFORMING TO ASTM A615, GRADE 60.
- ALL CONCRETE, REGARDLESS OF SPECIFIED DESIGN STRENGTH, SHALL CONTAIN STONE OR GRAVEL AGGREGATE SUCH THAT THE WEIGHT OF THE HARDENED CONCRETE IS 145 POUNDS PER CUBIC FOOT (+3%) WITH THE INCLUSION OF AIR ENTRAINMENT.
- ALL REINFORCING STEEL BARS SHALL BE SPICED AT ALL LAP POINTS, BENT AS REQUIRED, AND DEVELOPED AS PER THE TYPICAL DETAILS AND SCHEDULES.
- ALL DETAILING, BENDING, PLACEMENT AND SUPPORT OF REINFORCING SHALL CONFORM TO THE STANDARDS CITED IN NOTE 1, EXCEPT AS MODIFIED BY THE CONTRACT DRAWING.
- CLEAR CONCRETE COVER OVER PRINCIPLE REINFORCING SHALL BE AS CALLED FOR IN THE TYPICAL DETAILS AND OTHERWISE SHOWN ON THE CONTRACT DRAWINGS. PROVIDE 2" CLEARANCE TO ALL REBAR, UNLESS OTHERWISE NOTED.
- ALL HOLES, CUTS, OR OPENINGS, 12" OR LARGER IN SLABS REQUIRE THE CONSENT OF THE ENGINEER UNLESS THEY ARE SHOWN ON THE CONTRACT DRAWINGS.
- ALL CONSTRUCTION JOINTS SHALL BE THOROUGHLY CLEANED, WETTED AND SLUSHED WITH CEMENT GROUT JUST PRIOR TO PLACING NEW CONCRETE.
- AGGREGATES SHALL MEET THE REQUIREMENTS OF ASTM C33.
- THE SPACING OF REINFORCING SHOWN ON THE CONTRACT DRAWINGS IS THE MAXIMUM PERMITTED. IT MAY BE REDUCED FOR CONSTRUCTION CONSIDERATIONS BUT IS NOT TO BE EXCEEDED.
- ALL WELDED WIRE REINFORCEMENT (WWR) SHALL CONFORM TO ASTM A1064.
- ALL EXPOSED CONCRETE EDGES SHALL BE GROUND TO A 3/4" RADIUS OR CHAMFERED AS PER THE CONTRACT DRAWINGS.
- PROVIDE AND MAINTAIN ADEQUATE SHORING UNTIL THE STRUCTURE HAS BEEN COMPLETED AND CONCRETE HAS ACHIEVED FINAL STRENGTH.
- CONCRETE SHALL BE SEALED. ACCEPTABLE PRODUCT SHALL BE CARBOCRETE SEALER W6, OR EQUAL.
- CONCRETE SHALL BE LIGHT BROOM FINISHED.
- CURING SHALL BE WITH A NON STAINING CURING COMPOUND OR BY WATER CURE FOR A MINIMUM OF 5 DAYS. CURING COMPOUND SHALL BE FULLY REMOVED BEFORE SEALING CONCRETE.

STAINLESS STEEL NOTES

- ALL STAINLESS STEEL TO BE TYPE 316. STAINLESS STEEL IS TO CONFORM TO ASTM A167 & ASTM A276.

STRUCTURAL STEEL NOTES

- ALL STRUCTURAL STEEL WORK, INCLUDING DETAILING, FABRICATION AND ERECTION SHALL BE IN CONFORMANCE WITH THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION, MANUAL OF STEEL CONSTRUCTION, THIRTEENTH EDITION, EXCEPT AS HEREIN MODIFIED BY THE CONTRACT DRAWINGS AND SPECIFICATIONS.
- ALL STRUCTURAL STEEL SHOWN INCLUDING ANGLES, FLAT & BENT PLACES SHALL BE HIGH STRENGTH, LOW ALLOW STEEL WITH CORROSION RESISTANCE, TYPE ASTM A588 MATERIAL.
- ALL HIGH STRENGTH BOLTS SHALL BE 3/4" DIAMETER FRICTION TYPE BOLTS CONFORMING TO ASTM A 325-02 U.N.O. PROVIDE A HARDENED WASHER UNDER THE TURNED ELEMENT (NUT OR BOLT HEAD). BOLTS AND NUTS TO BE "MADE IN THE USA".
- THE INSTALLATION AND TIGHTENING OF ALL HIGH STRENGTH BOLTS SHALL CONFORM TO THE "SPECIFICATIONS FOR STRUCTURAL JOINTS USING ASTM A325-02 BOLTS-ERECTION SHALL USE THE CALIBRATED WRENCH METHOD OF INSTALLATION.
- ALL ANCHOR BOLTS SHALL BE ASTM F1554-GR.36, UNLESS OTHERWISE NOTED.
- ALL WELDING PROCEDURES SHALL CONFORM TO THE AMERICAN WELDING SOCIETY CODE, AWS D1.1 PROVISIONS FOR WELDED JOINTS WITH WEATHERING STEELS.

STEEL FASTENERS AND HARDWARE

- TYPE 316 STAINLESS STEEL SHALL BE USED FOR ALL FASTENERS, PLATES, AND CONNECTORS EXPOSED TO LIQUID. TYPE 304 SS SHALL BE USED FOR ALL OTHER FASTENERS. BOLTING MATERIALS ARE TO CONFORM TO ASTM A193.
- FASTENERS AND CONNECTORS USED TOGETHER SHOULD BE OF THE SAME TYPE. DO NOT MIX HOT-DIPPED GALVANIZED ITEMS WITH STAINLESS STEEL.
- ALL NON-STAINLESS STEEL PLATES AND SHIMS SHALL COMPLY WITH THE REQUIREMENTS OF ASTM A588.
- EDGE ANGLES, CLIP ANGLES, PLATES, BARS AND OTHER MISCELLANEOUS ROLLED SHAPES SHALL BE ASTM A588 STRUCTURAL STEEL, U.N.O.

FRP NOTES

- FIBERGLASS REINFORCED PLASTIC (FRP) MATERIALS ARE TO CONFORM TO THE REQUIREMENTS OF THE CONTRACT DOCUMENTS AND BE SUITABLE FOR THE INTENDED USE.
- FRP MANHOLE SHALL SUPPORT A LIVE LOAD OF 250 PSF.
- FRP MANHOLE TO BE FIBERSHIELD MANHOLE AS MANUFACTURED BY MCGARD, LLC, OR EQUAL. FRP MANHOLE INSTALLATION AND OPERATION REQUIREMENTS SHALL FOLLOW ALL MANUFACTURERS RECOMMENDATIONS AND INSTRUCTIONS.

GRADE AND STREAM BED RESTORATION

- ALL RESTORED AREAS NOT SHOWN AS PART OF THE CONTRACT DOCUMENTS SHALL BE RESTORED TO EXISTING CONDITION.

CONCRETE TESTING REQUIREMENTS

- TEST SAMPLES SHALL BE MADE AND TESTED IN ACCORDANCE WITH ASTM C31 AND ASTM C39.
- FIVE 6" X 12" CYLINDERS SHALL BE MADE FOR EACH 20 CUBIC YARDS OF CONCRETE. NO LESS THAN ONE SET OF FIVE FOR EACH DAY OF CONCRETE PLACED.
- TESTING SCHEDULE:
1 CYLINDER @ 7 DAYS
3 CYLINDERS @ 28 DAYS
1 CYLINDER @ 56 DAYS (IF NEEDED)
- CYLINDERS SHALL BE STORED IN A TEMPERATURE CONTROLLED CURING BOX FOR A MIN OF 24 HOURS.

SUBMITTALS

- SUBMITTALS SHALL INCLUDE BUT NOT BE LIMITED TO CONCRETE MIX WITH PRODUCT DATA, REINFORCING DRAWINGS, STEEL FABRICATION DRAWINGS, COATINGS, MISCELLANEOUS EMBEDDED ITEMS, FASTENERS, ADHESIVES, PREENGINEERED FABRICATION DRAWINGS, CALCULATIONS.

BAR SIZE		CONCRETE COVER TO BAR									
INCH POUND	SOFT METRIC	0.75 IN.		1.00 IN.		1.50 IN.		2.0 IN.		3.0 IN.	
		TOP	OTHER	TOP	OTHER	TOP	OTHER	TOP	OTHER	TOP	OTHER
#3	#10	16	16	16	16	16	16	16	16	16	16
#4	#13	24	19	20	16	20	16	20	16	20	16
#5	#16	36	28	29	22	24	19	24	19	24	19
#6	#19	48	37	40	31	29	22	29	22	29	22
#7	#22	78	60	64	50	48	37	42	33	33	23
#8	#25	96	74	80	62	60	47	48	37	42	29
#9	#29	117	90	98	76	74	57	60	46	42	32
#10	#32	140	108	119	92	91	79	74	57	47	36
#11	#36	166	127	141	108	109	84	89	68	51	40

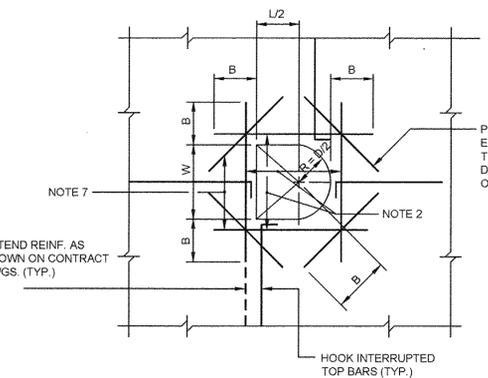
- NOTES:**
- CONCRETE TO BE NORMAL WEIGHT CONCRETE WITH A 28 DAY ULTIMATE COMPRESSIVE STRENGTH $F'_c=4,500$ PSI.
 - REINFORCING TO BE UNCOATED BARS CONFORMING TO ASTM A615, GRADE 60.
 - LENGTHS SHOWN IN TABLE HAVE BEEN CALCULATED AS PER SECTIONS 12.2.3 AND 12.15 OF THE ACI CODE.
 - LENGTHS SHOWN ARE "TYPE B" CLASS LAPS, WHERE LESS THAN 1/2 OF THE REINFORCING IS LAPPED AT ANY ONE LAP LOCATION, 0.77 OF THE LENGTHS GIVEN IN THE TABLE MAY BE USED (TYPE A CLASS LAPS).
 - TOP BARS ARE HORIZONTAL BARS WITH MORE THAN 12 INCHES OF CONCRETE CAST BELOW THE BAR.
 - LENGTHS SHOWN IN TABLE ARE BASED UPON A MINIMUM CENTER-TO-CENTER BAR SPACING OF TWICE THE CONCRETE COVER PLUS ONE BAR DIAMETER.
 - CLEAR COVER TO REINFORCING TO BE NOT LESS THAN THE NOMINAL BAR DIAMETER.

BAR SIZE		DOWEL EMBEDMENT	COMPRESSION LAP
INCH POUND	SOFT METRIC		
#3	#10	8	12
#4	#13	10	15
#5	#16	12	19
#6	#19	15	23
#7	#22	17	27
#8	#25	19	30
#9	#29	22	34
#10	#32	24	38
#11	#36	27	42

- NOTES:**
- CONCRETE TO HAVE A MINIMUM 28 DAY ULTIMATE COMPRESSIVE STRENGTH $F'_c=4,500$ PSI.
 - REINFORCING TO CONFORM TO ASTM A615 - GRADE 60.

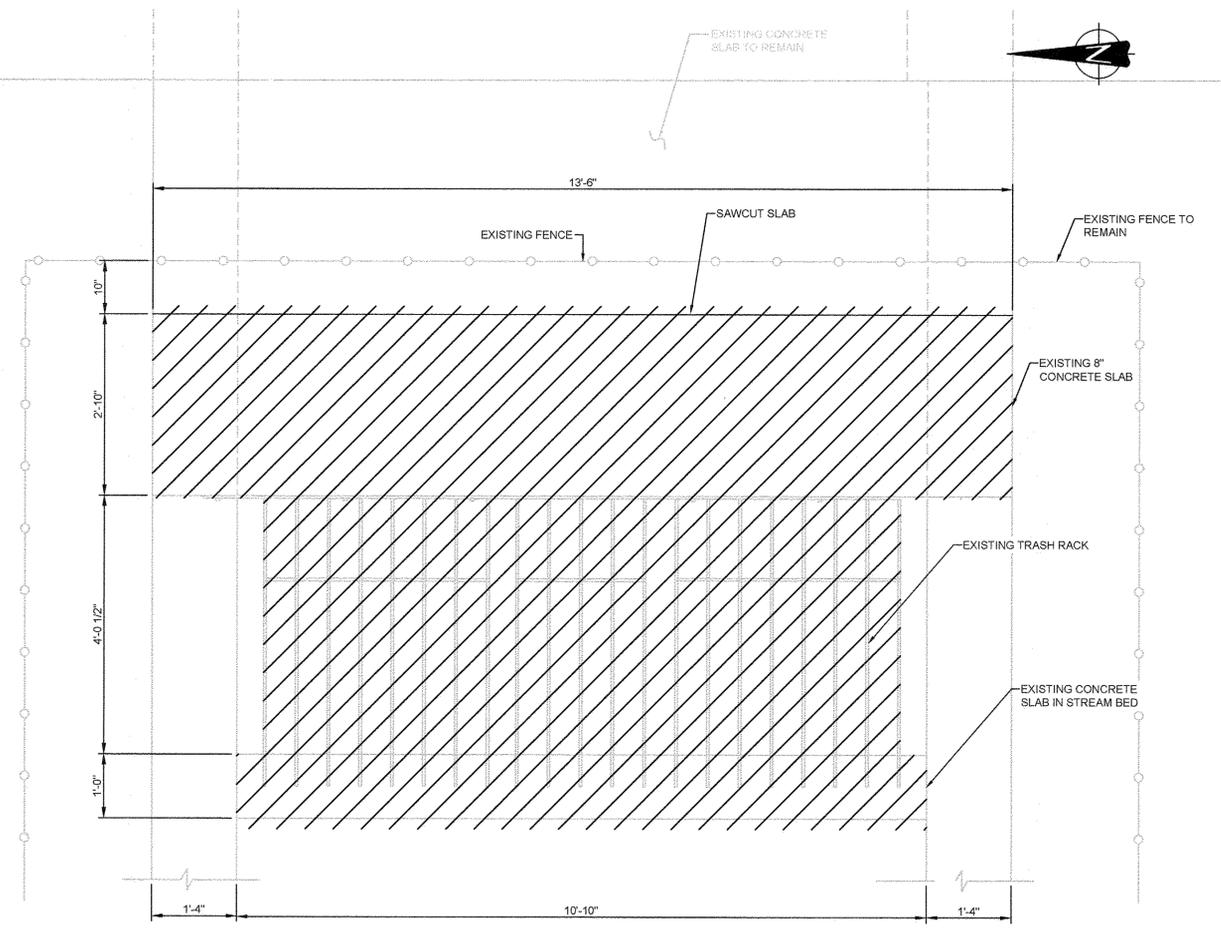
REIN. LAP SPLICE, DEVELOPMENT & EMBEDMENT SCHEDULES

($F_y = 60,000$ PSI)



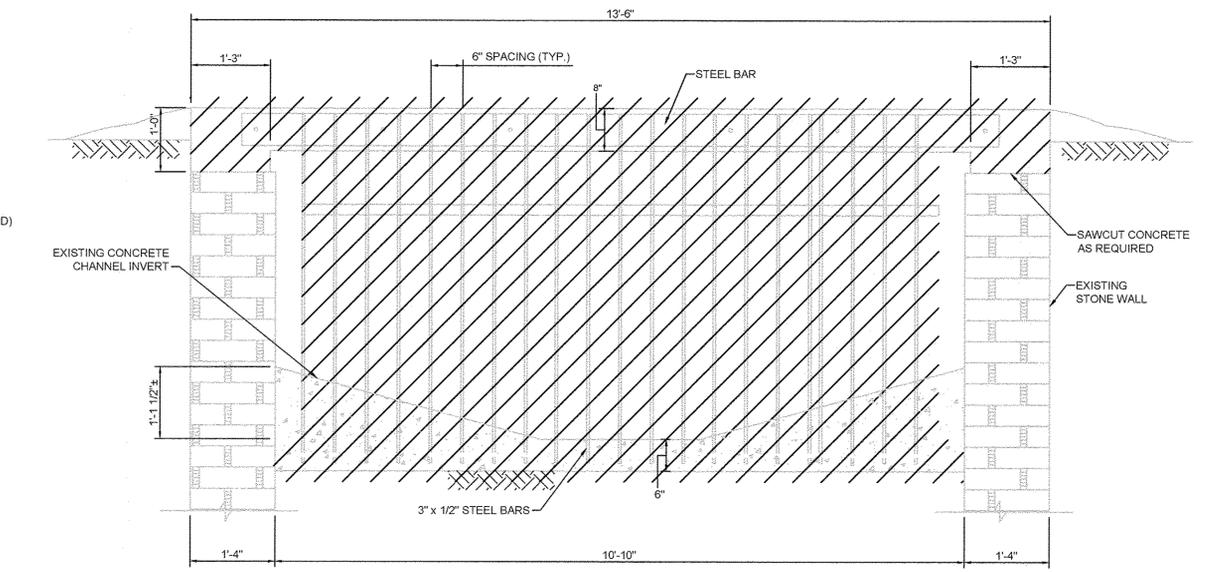
- NOTES: (UNLESS NOTED OTHERWISE ON PLANS)**
- STOP BOTTOM SLAB REINF. AT OPENING
 - PROVIDE REINF. EACH SIDE OF OPENING (T & B) EQUAL TO AREA OF REINF. STOPPED AT OPENING (UNLESS NOTED OTHERWISE)
 - PROVIDE LAP SPLICE TYPE "B" WHERE NOTED "B" ON ABOVE DETAIL
 - OPENINGS NOT SHOWN ON THE CONTRACT DWGS. TO BE REVIEWED BY THE ENGINEER BEFORE PLACING.
 - D = DIAMETER OF OPENING
 - W = WIDTH OF OPENING
 - L = LENGTH OF OPENING
 - OPENINGS SHALL BE A MIN OF 1'-0" FROM THE FACE OF COLUMN OR WALL UNLESS NOTED OTHERWISE

TYP. DETAIL OF ADD'L. REINF AT 1'-0" OR LARGER OPENINGS IN SOLID SLABS



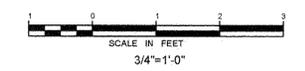
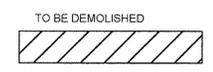
TRASH RACK DEMOLITION PLAN

SCALE: 3/4" = 1'-0"



DEMOLITION SECTION

SCALE: 3/4" = 1'-0"



<p>JOSEPH C. CARUSO PROFESSIONAL ENGINEER - N.J. Lic. No. GE051740</p>		<p>Date: 01/24/14</p>
<p>Approved</p>	<p>Checked</p>	<p>Date</p>
<p>Drawn</p>	<p>Checked</p>	<p>Date</p>
<p>Designed</p>	<p>JCC</p>	<p>Date</p>
<p>Hatch Mott MacDonald Certificate No. 246A28016800 111 Wood Avenue South Iselin, New Jersey 08830-4112</p>		
<p>CITY OF SUMMIT SUMMIT, NEW JERSEY MEMORIAL FIELD RENOVATIONS MYRTLE AVENUE TRASH RACK</p>		
<p>TYPICAL NOTES, DETAILS AND DEMOLITION DETAILS</p>		
<p>Job No.</p>	<p>No.</p>	<p>ST-3</p>
<p>326346</p>	<p>B/O</p>	<p>Total</p>