



 Property Boundary

0 135 270 540 810 1,080 Feet

NW 97TH AVE



Eruditional
MIAMI-DADE COUNTY, FLORIDA



RS Environmental Consulting Inc.
P.O. Box 161158
Miami FL, 33116
Phone: 305-383-3404
Fax: 305-3833270
www.rs-env.com

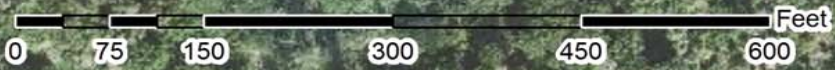
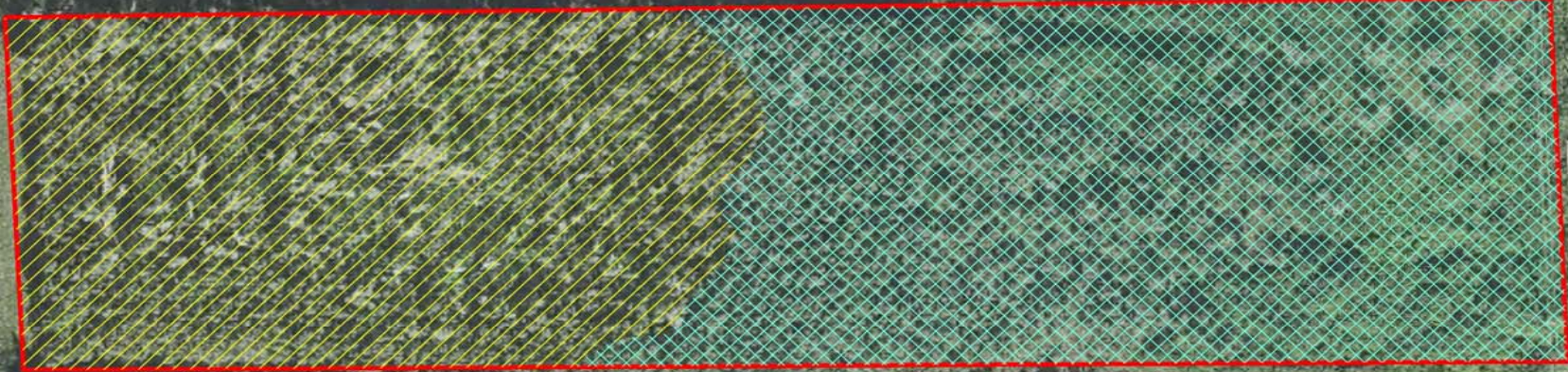
2012 Aerial

Location Map

T-52,R-40,S-17

DRAWN BY: LVK	DATE: 4-20-2015
CHECKED BY: RWS	SCALE: AS SHOWN

-  Property Boundary
-  Disturbed Wetlands
-  Exotic Dominated Wetlands w/ Fern & Sawgrass Understory



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MIAMI-DADE COUNTY, FLORIDA



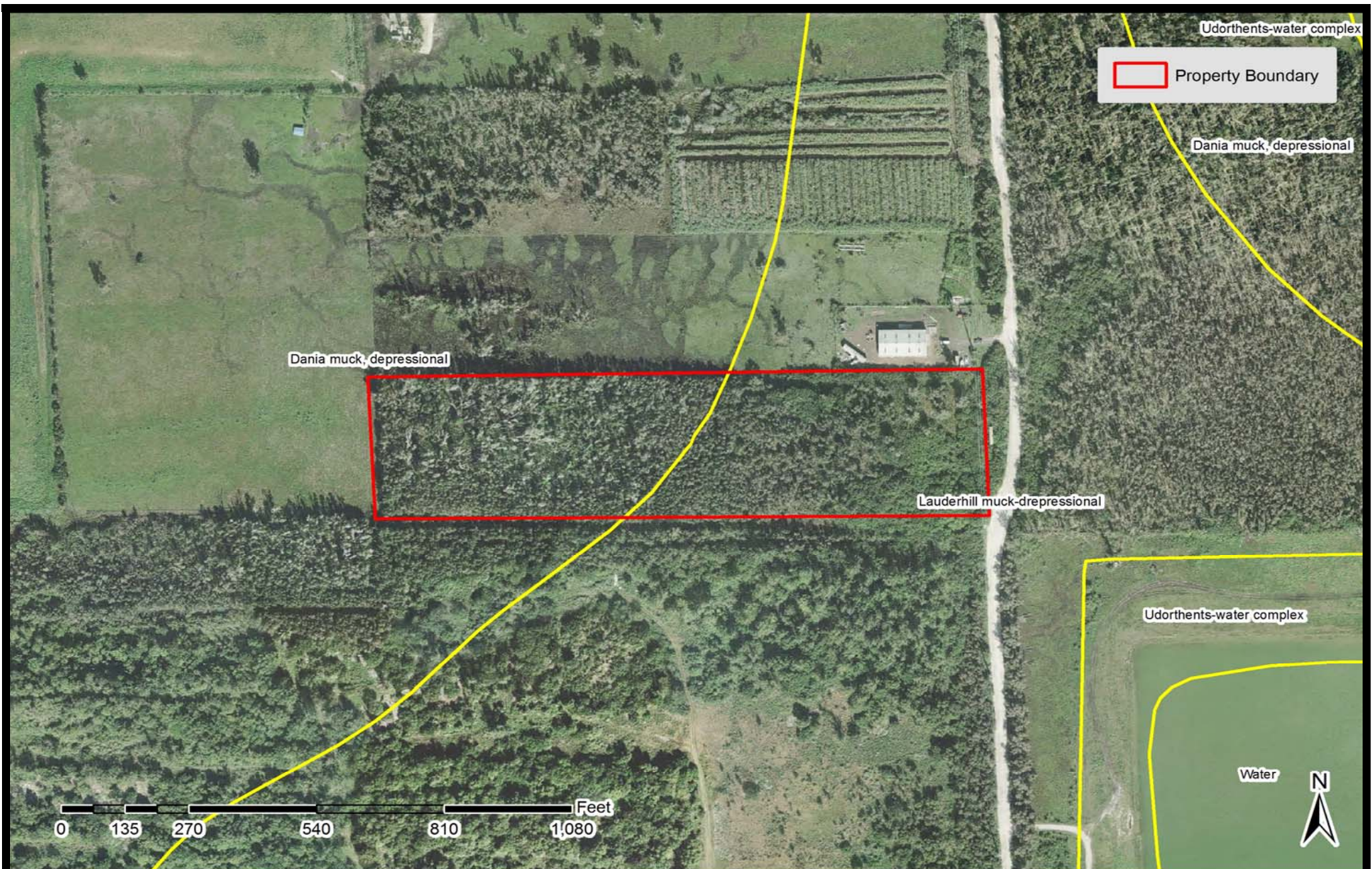
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2012 Aerial

Wetland ID Map

T-52,R-40,S-17

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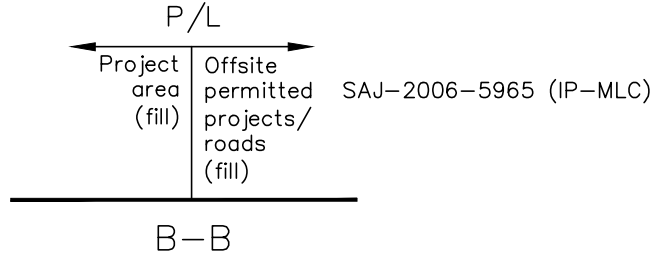
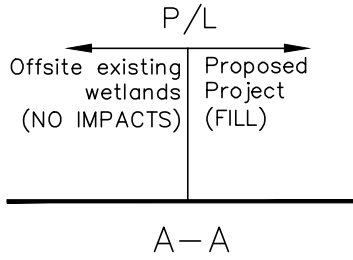
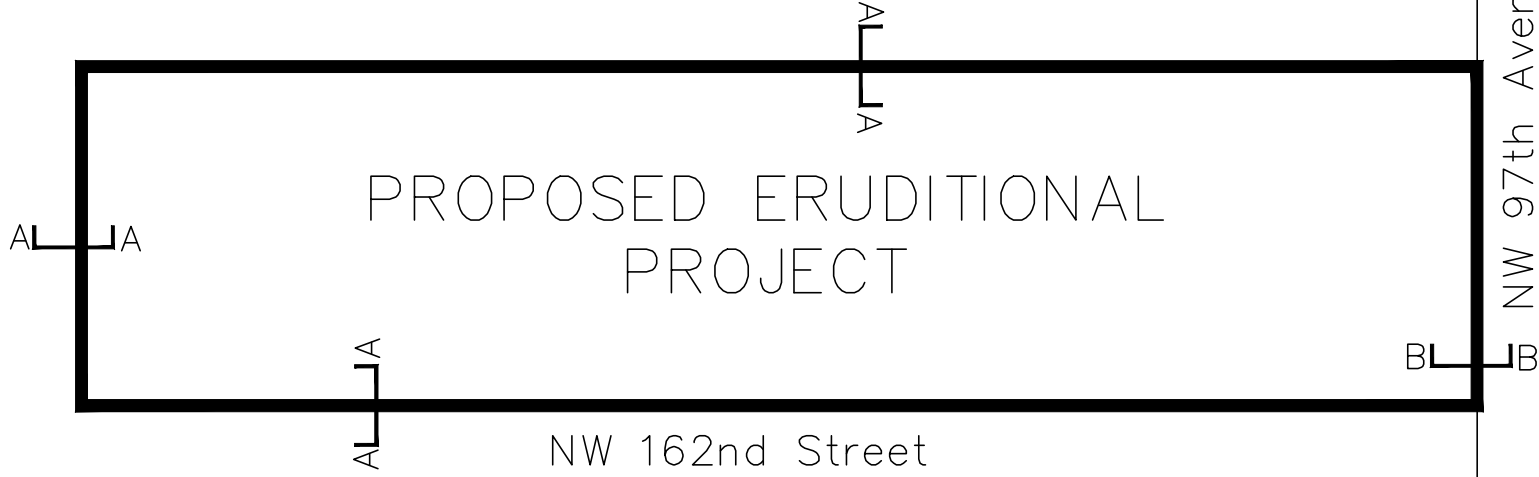
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2012 Aerial

Soils Map

T-52,R-40,S-17

DRAWN BY: LVK	DATE: 4-20-2015
CHECKED BY: RWS	SCALE: AS SHOWN



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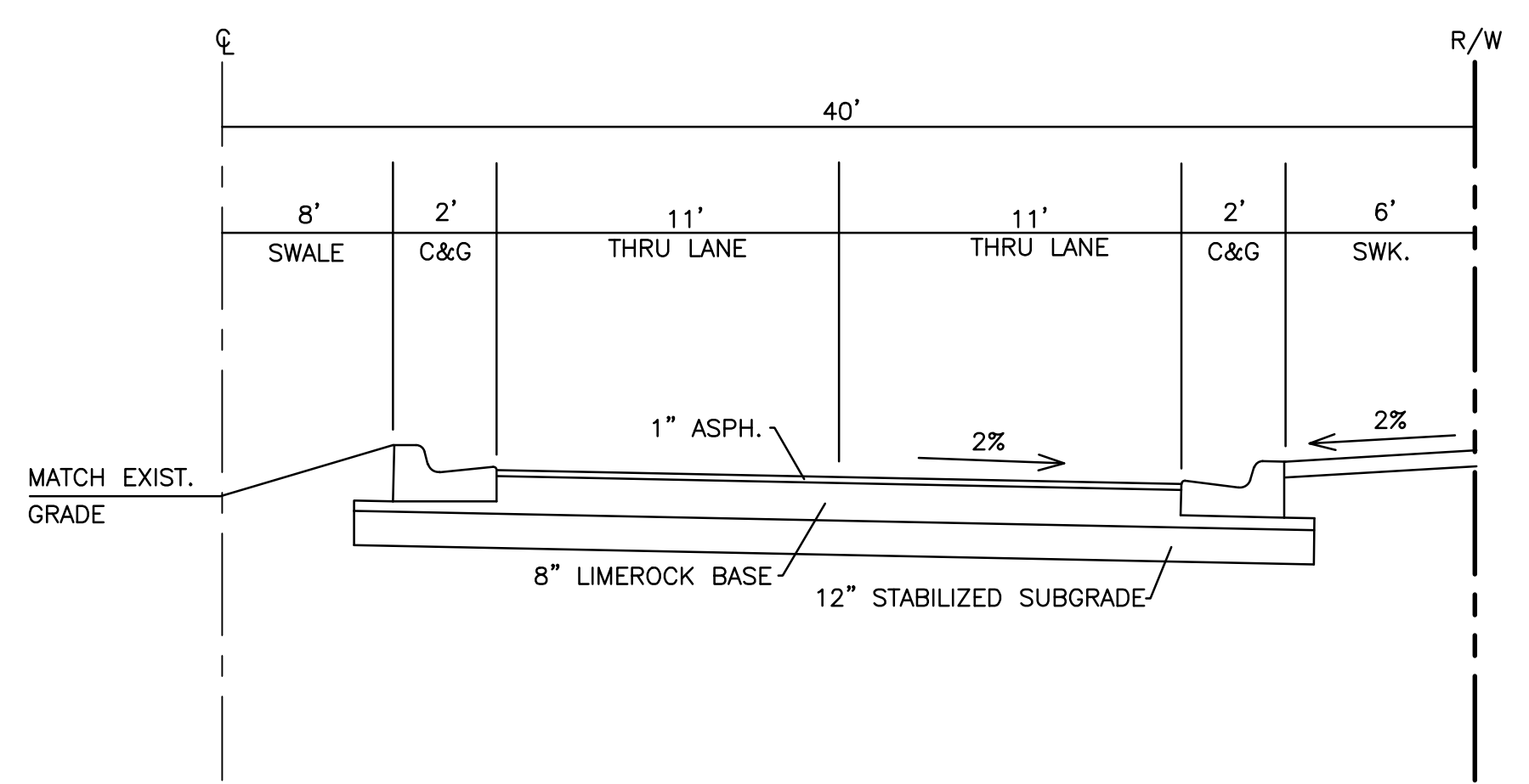
P.O. Box 161158
 Miami, FL 33116-1158
 Phone: (305) 383-3404
 Fax: (305) 383-3270
www.rs-env.com

PROJECT: ERUDITIONAL
 SHEET NAME: ACOE CROSS SECTION PLAN VIEW
 PREPARED FOR: MICHAEL OSMAN
 PROJECT No: SEC. 17-52-40 HIALEAH, FL
 DATE: 5-13-15
 SCALE: NTS

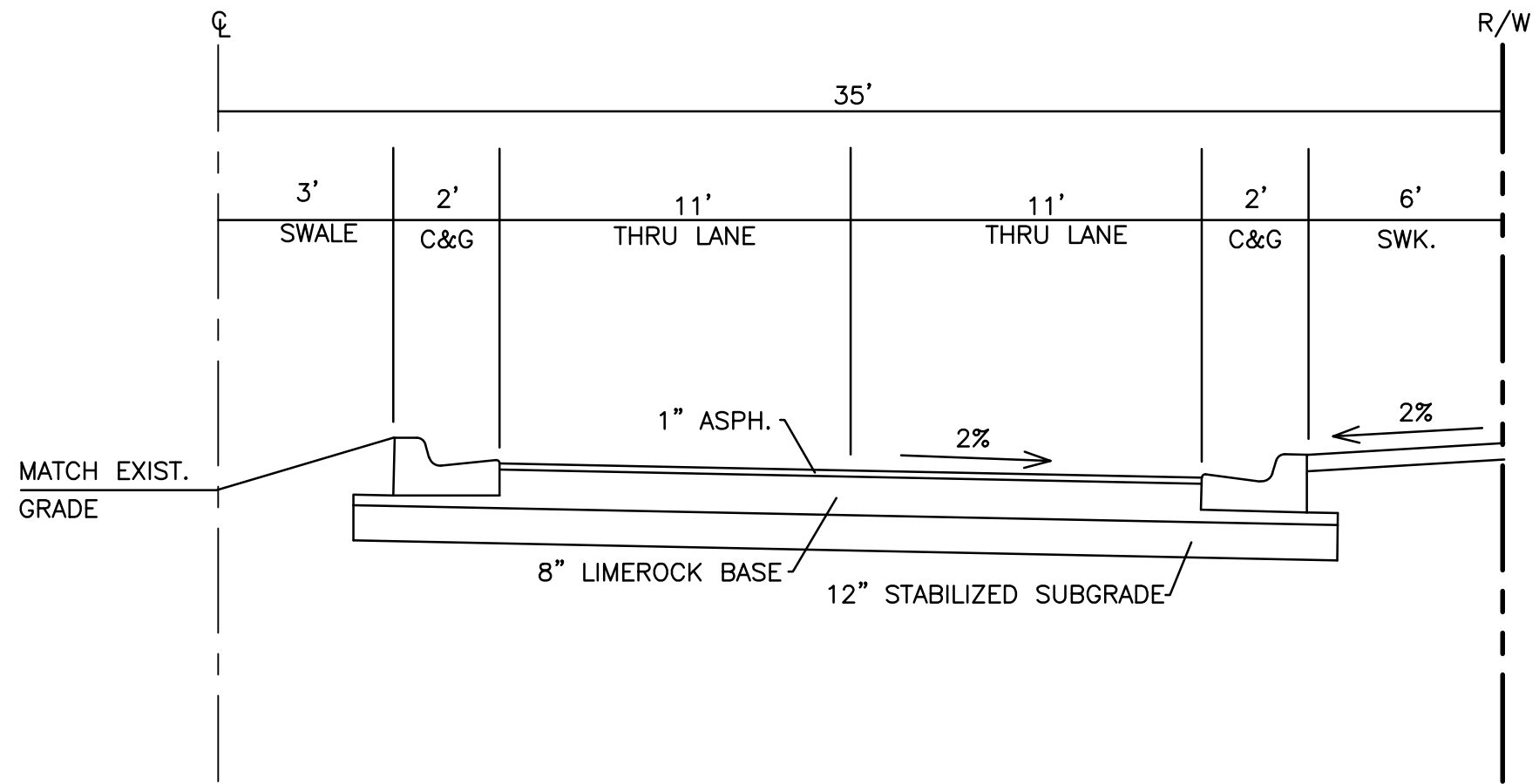
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NW 97th Avenue

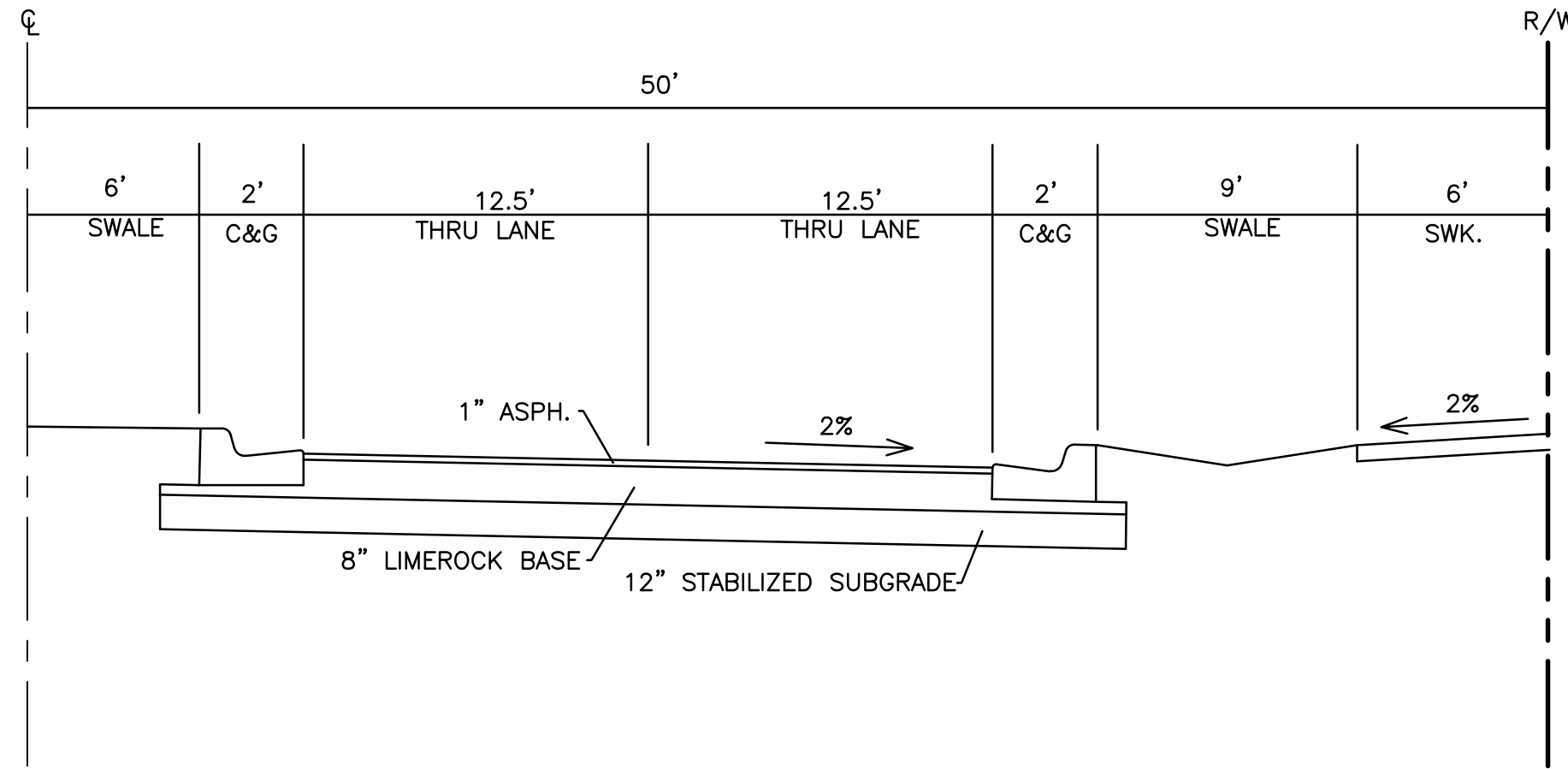
NW 162nd Street



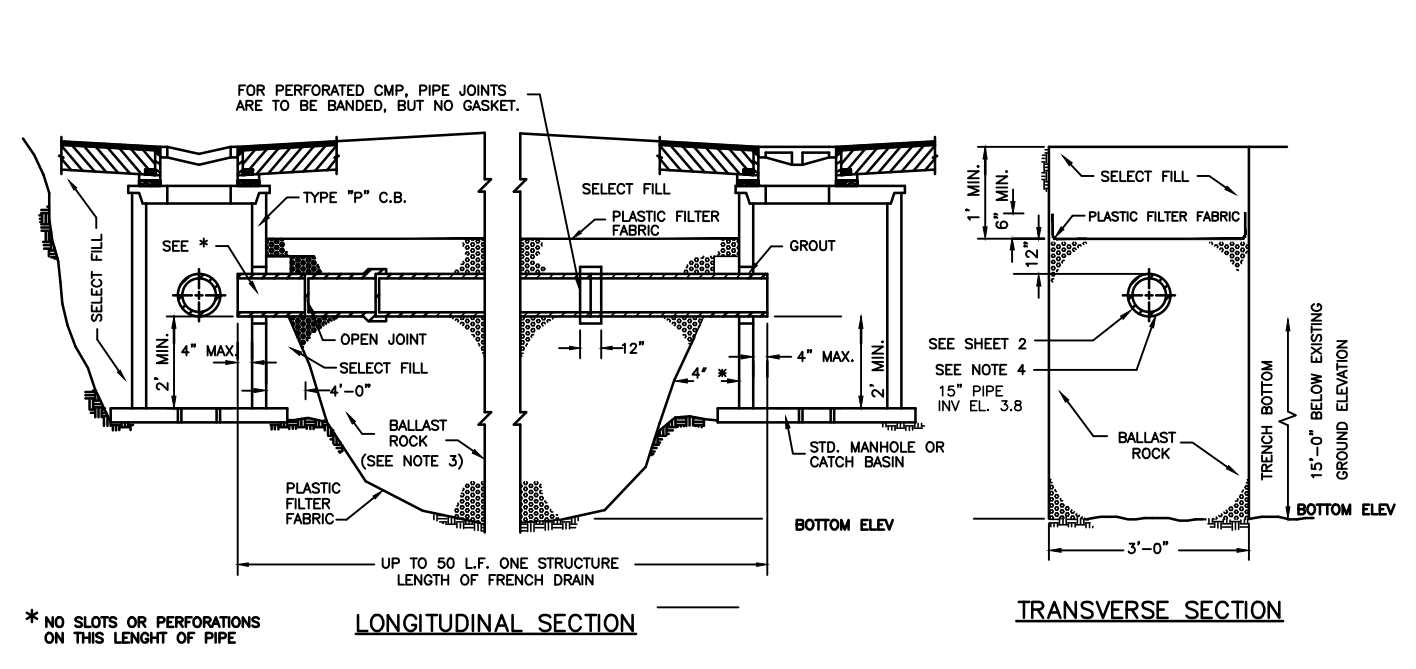
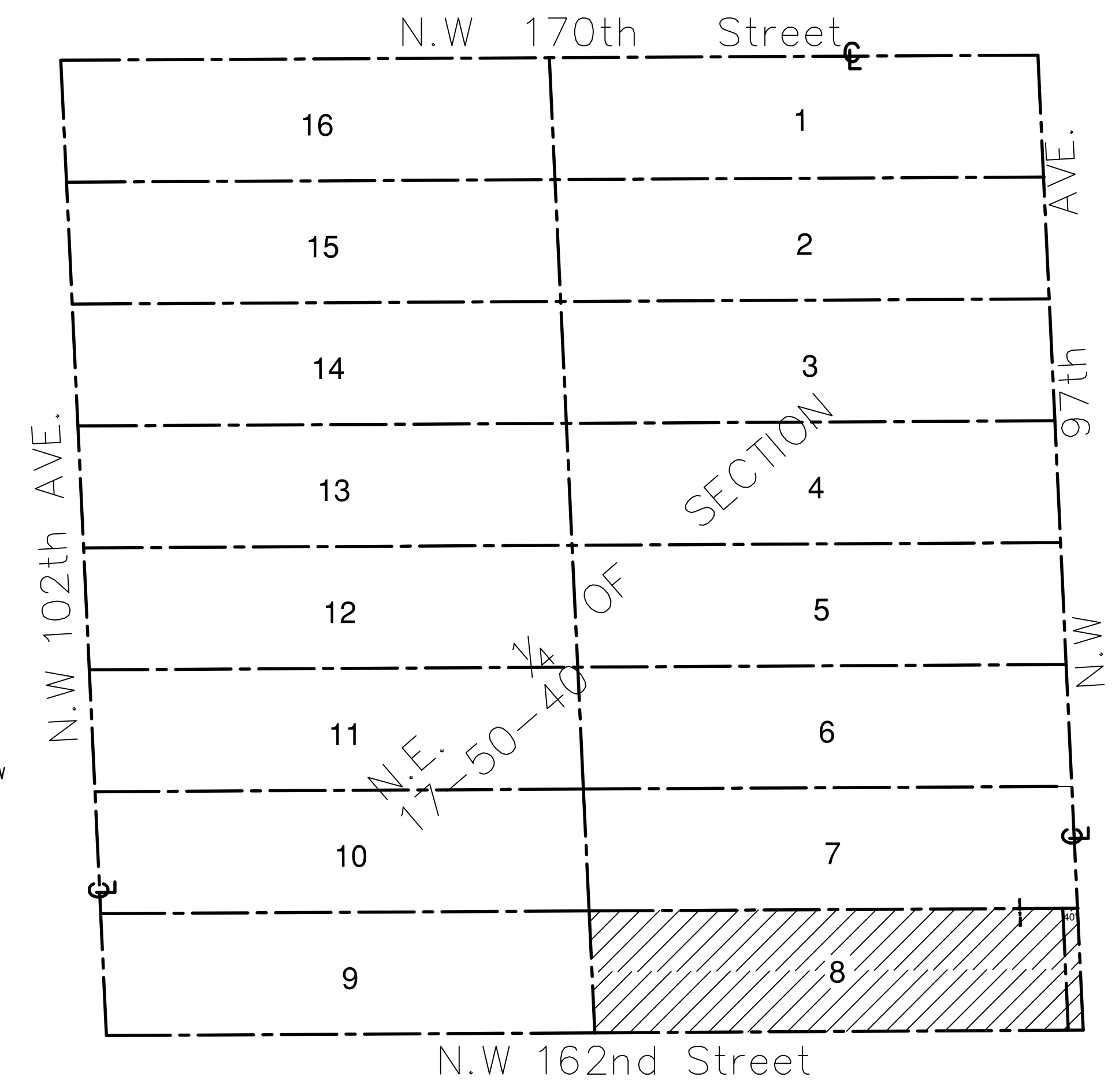
TYPICAL SECTION NW 162 STREET
N.T.S.



TYPICAL SECTION NW 99 AVE.
N.T.S.



TYPICAL SECTION NW 97 AVE.
N.T.S.



NOTES:
 1. PLASTIC FILTER FABRIC (AT EA. SIDE) SHALL BE USED IN SANDY AREAS AS NOTED ON PLANS AND/OR AS DIRECTED BY THE ENGINEER.
 2. THE BOTTOM OF THE EXFILTRATION TRENCH SHALL BE 15"-0" BELOW EXISTING GROUND ELEVATION, UNLESS FIELD CONDITIONS WARRANT OTHERWISE.
 3. AFTER THE BALLAST ROCK HAS BEEN PLACED TO THE PROPER ELEVATION, IT SHALL BE CAREFULLY WASHED DOWN WITH CLEAN WATER IN ORDER TO ALLOW FOR INITIAL SETTLEMENT THAT MAY OCCUR. IF IT DOES TAKE PLACE, ADDITIONAL BALLAST ROCK WILL BE ADDED TO RESTORE THE BALLAST ROCK TO THE PROPER ELEVATION, SO THAT THE EXFILTRATION TRENCH BE COMPLETED IN ACCORDANCE WITH THE DETAILS.
 4. INVERT ELEVATION TO BE AS SHOWN IN W.C. 2.2 (AVG. OCTOBER GROUND WATER LEVEL).

EXFILTRATION DETAIL
N.T.S.

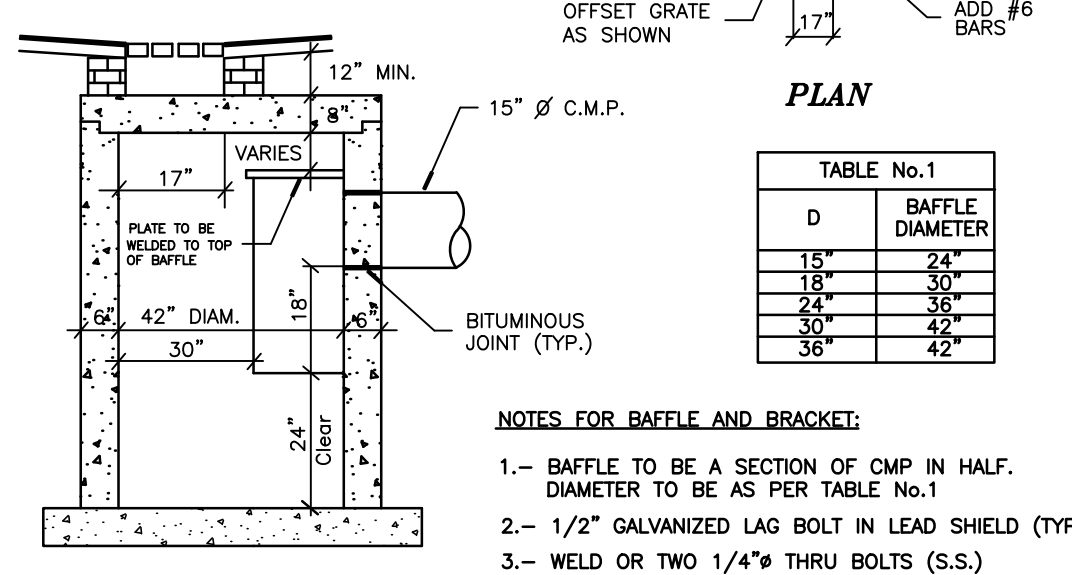
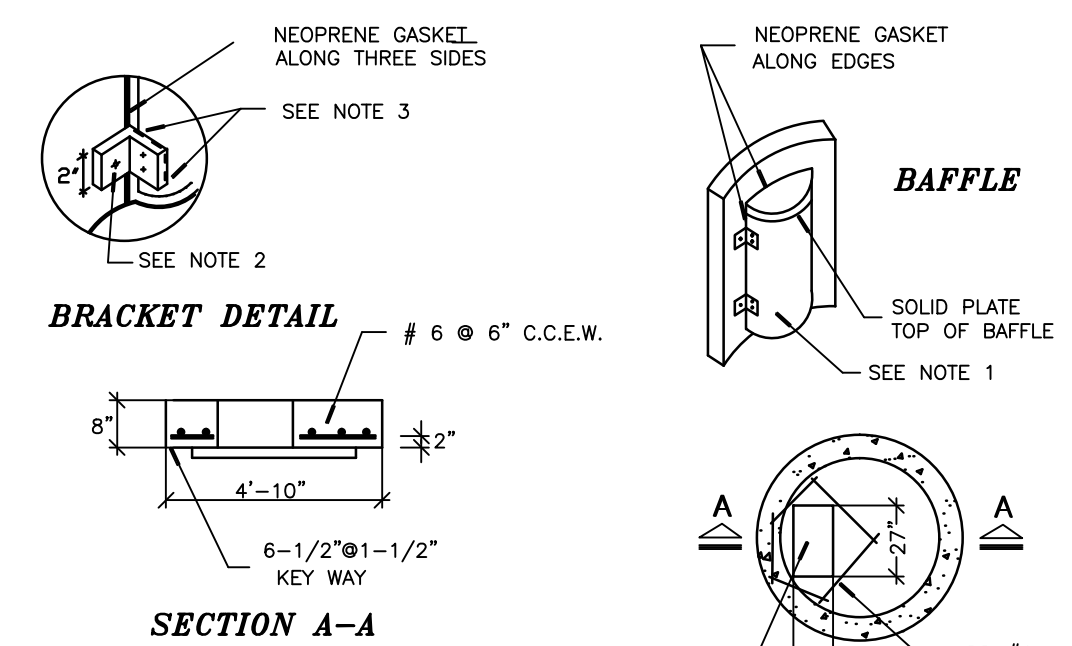


TABLE No.1

D	BAFFLE DIAMETER
15"	24"
18"	30"
24"	36"
30"	42"
36"	48"

- NOTES FOR BAFLE AND BRACKET:
 1.- BAFLE TO BE A SECTION OF CMP IN HALF DIAMETER TO BE AS PER TABLE No.1
 2.- 1/2" GALVANIZED LAG BOLT IN LEAD SHIELD (TYP.)
 3.- WELD OR TWO 1/4" THRU BOLTS (S.S.)
 4.- WHERE TWO BAFFLES ARE REQUIRED IN THE SAME DRAINAGE STRUCTURE, CLEAR DISTANCE BETWEEN BAFFLES SHOULD BE 2'.
 5.- COST OF LABOR MATERIAL AND INSTALLATION OF THE BAFLE TO BE INCLUDED IN THE COST OF THE INLET.

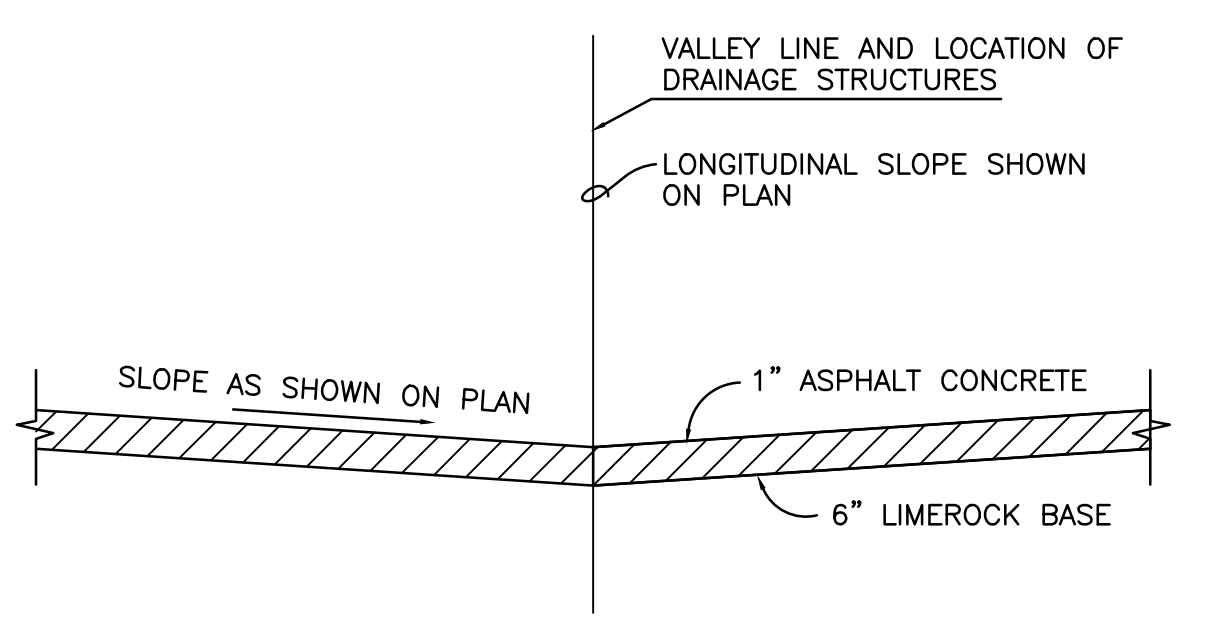
DRAINAGE CALCULATIONS

Rational Formula: V=CAR
 Average C: 0.74
 5 Year Storm, 1hour Rainfall: 6.2
 USUAL OPEN HOLE TEST: SEE ATTACHED TEST RESULTS

$$L = \frac{V}{K(2HDu - Du^2 + 2HDs) + (1.39 \times 10^{-4})Wdu}$$

L= LENGTH OF TRENCH REQUIRED (FEET)
 V= VOLUME TREATED (ACRE INCHES)
 W= WIDTH OF TRENCH (FEET)
 K= HYDRAULIC CONDUCTIVITY 2.04E-004
 H= DEPTH TO WATER TABLE (FEET) 3.1
 Du= NON-SATURATED TRENCH DEPTH (FEET) 2.1
 Ds= SATURATED TRENCH DEPTH (FEET) 11.9

DRAINAGE AREA	AREA (ACRES)	VOL. TO TREAT (ACRE-IN)	K	LENGTH REQ. (FEET)	LENGTH PROV. (FEET)
LOT 1	1.84	8.46	2.04E-004	478	
LOT 2	2.20	10.07	2.04E-004	570	
LOT 3	4.15	19.02	2.04E-004	1076	
R/W 1	0.36	1.65	2.04E-004	93	
R/W 2	0.39	1.65	2.04E-004	102	
R/W 3	0.55	1.65	2.04E-004	143	
R/W 4	0.51	1.65	2.04E-004	131	

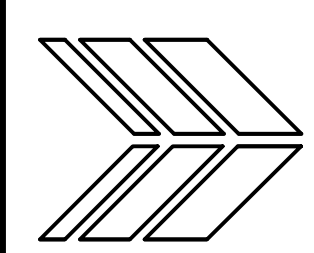


GENERAL NOTES

- ALL WORK IS TO BE PERFORMED IN COMPLIANCE WITH THE REQUIREMENTS, STANDARDS, AND SPECIFICATIONS OF THE METROPOLITAN DADE COUNTY PUBLIC WORKS DEPARTMENT.
- BASIC SPECIFICATIONS TO BE IN ACCORDANCE WITH THE DADE COUNTY PUBLIC WORKS MANUAL.
- ALL ELEVATIONS REFER TO N.G.V.D.
- ALL UNDERGROUND INSTALLATIONS SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO COMMENCEMENT OF WORK. NEITHER THE ENGINEER NOR THE PROPERTY OWNER SHALL BE RESPONSIBLE FOR DAMAGE TO EXISTING FACILITIES DURING EXCAVATION OR CONSTRUCTION.
- ALL UNSUITABLE MATERIAL TO BE REMOVED FROM RIGHT OF WAY AREAS AND REPLACED WITH ACCEPTABLE ROAD ROCK PRIOR TO CONSTRUCTION.
- CATCH BASINS AND SURROUNDING PAVEMENT TO BE PER METROPOLITAN DADE COUNTY STANDARD DETAILS.
- GRASS ALL SWALE AND SOD ALL DRAINAGE RIGHT OF WAY INTERSECTIONS AS NECESSARY.
- REFER TO SURVEY BY ROYAL POINT SURVEYORS, INC. FOR EXISTING CONDITIONS AND ELEVATIONS.
- POLLUTION CONTROL BAFFLES ARE REQUIRED TO BE INSTALLED ON ALL CATCH BASINS ADJACENT TO EXFILTRATION TRENCHES.
- REFER TO ATTACHED "EROSION & SEDIMENT CONTROL" DETAILS AND SPECIFICATIONS FOR MIAMI GARDENS PARK FOR DETAILS AND NOTES REGARDING EROSION & SEDIMENT CONTROL.

SHARON AYLWARD COX
 PE No. 43906
 STATE OF FLORIDA

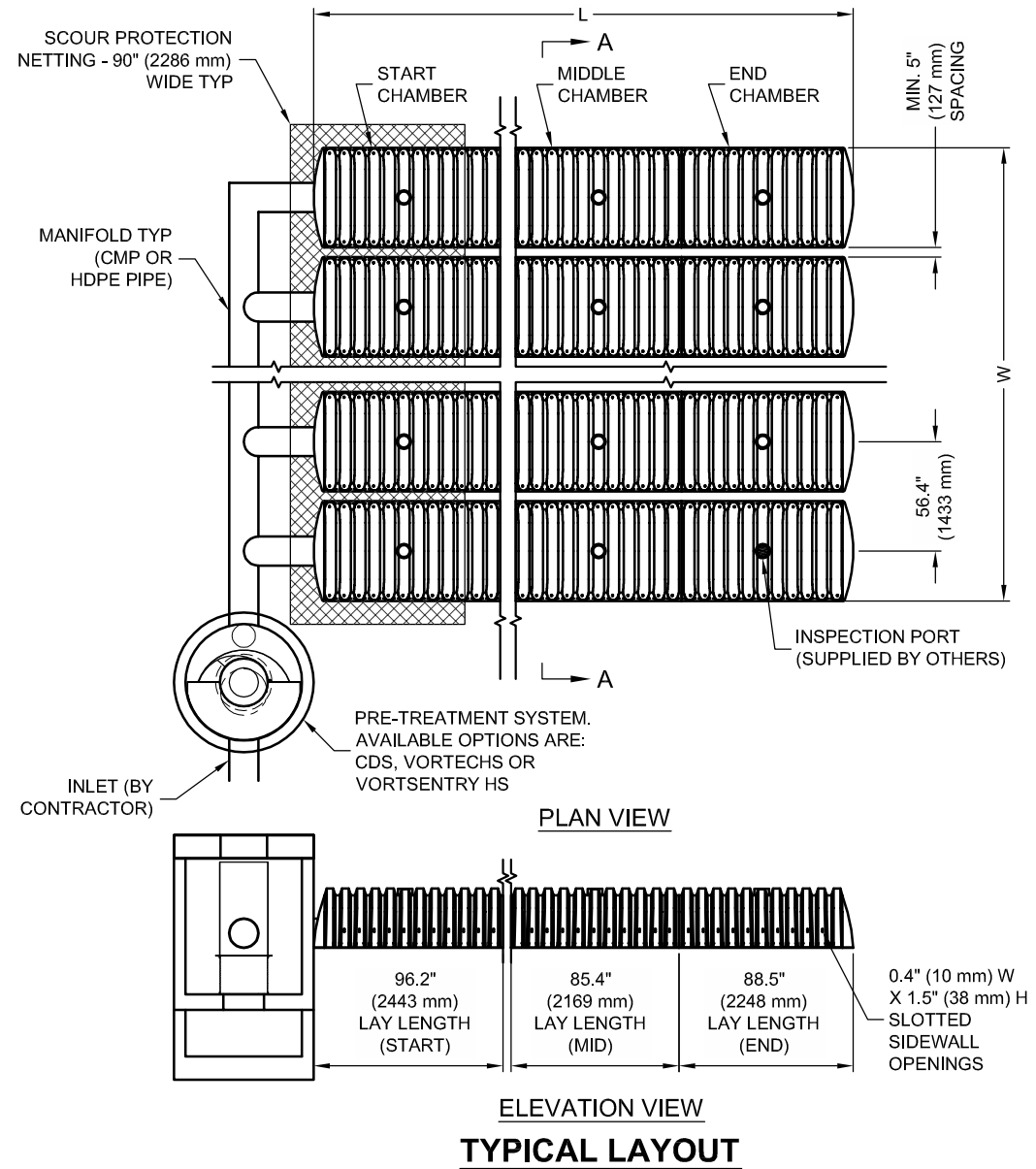
DRAWN CAD			PROJECT NAME: ERUDITION SUBDIVISION			SHEET TITLE: CONCEPTUAL PAVING & DRAINAGE			CONTRACTOR SHALL VERIFY ALL DIMENSIONS AT SITE BEFORE PROCEEDING W/WORK			SHEET 2
CHECKED EAM									DATE: 8/26/2015			OF 2
APPROVED SAC									SCALE: 1"=50'			
NO. REVISION DATE									PROJ. NO.: 14-118			



AYLWARD ENGINEERING & SURVEYING, INC.
 CIVIL ENGINEERS & LAND SURVEYORS
 3222 Ridge Trace, Davie, Florida 33328
 954-424-5852 or 305-827-2216 Fax 954-424-5852 or 305-827-2216

CONTRACTOR SHALL VERIFY ALL DIMENSIONS AT SITE BEFORE PROCEEDING W/WORK
 DATE: 8/26/2015
 SCALE: 1"=50'
 PROJ. NO.: 14-118

I:\STORMWATER\DRAWING\NEW STD CONVERSIONS\DETENTION\CHAMBERMAXX\CCP-CM-STANDARD DETAIL.DWG 8/19/2010 12:01 PM



CHAMBERMAXX DESIGN DETAILS

FEATURE	START CHAMBER	MIDDLE CHAMBER	END CHAMBER
OVERALL CHAMBER HEIGHT - IN (mm)	30.3 (770)	30.3 (770)	30.3 (770)
OVERALL CHAMBER WIDTH - IN (mm)	51.4 (1306)	51.4 (1306)	51.4 (1306)
ACTUAL LENGTH - IN (mm)	98.4 (2500)	91.0 (2311)	92.0 (2337)
INSTALLED LAY LENGTHS - IN (mm)	96.2 (2443)	85.4 (2169)	88.5 (2248)
CHAMBER STORAGE VOLUME - CF (m³)	52.5 (1.49)	49.3 (1.39)	48.2 (1.36)
CHAMBER STORAGE PER LINEAR FOOT - CF/LF (m³/m)	6.5 (0.604)	6.9 (0.641)	6.5 (0.604)
*MIN. INSTALLED CHAMBER VOLUME - CF (m³)	78.7 (2.23)	76.7 (2.17)	76.1 (2.15)
*MIN. INSTALLED CHAMBER VOLUME PER LINEAR FOOT - CF/LF (m³/m)	9.8 (0.910)	10.8 (1.003)	10.3 (0.957)
CHAMBER WEIGHT - LB (kg)	85 (38.55)	77 (34.92)	76 (34.47)

*6" (152 mm) OF STONE ABOVE AND BELOW CHAMBER, 5" (127 mm) CHAMBER SPACING AND 40% POROSITY

* SITE SPECIFIC DATA REQUIREMENTS	
FOR DETAILED DESIGN ASSISTANCE REFERENCE CHAMBERMAXX DYODS (DESIGN YOUR OWN DETENTION SYSTEM) SOFTWARE AND CHAMBERMAXX STAGE STORAGE CALCULATOR @ WWW.CONTECHSTORMWATER.COM	
TOTAL REQUIRED STORAGE VOLUME (CF OR m³)	
DEPTH TO INVERT BELOW ASPHALT (FT OR m)	
LIMITING WIDTH (FT OR m)	
LIMITING LENGTH (FT OR m)	
POROUS STONE ABOVE CHAMBER (IN OR mm)	
POROUS STONE BELOW CHAMBER (IN OR mm)	
STONE POROSITY (0 TO 40%)	
MANIFOLD SYSTEM DIAMETER (IN OR mm)	
* PER ENGINEER OF RECORD	

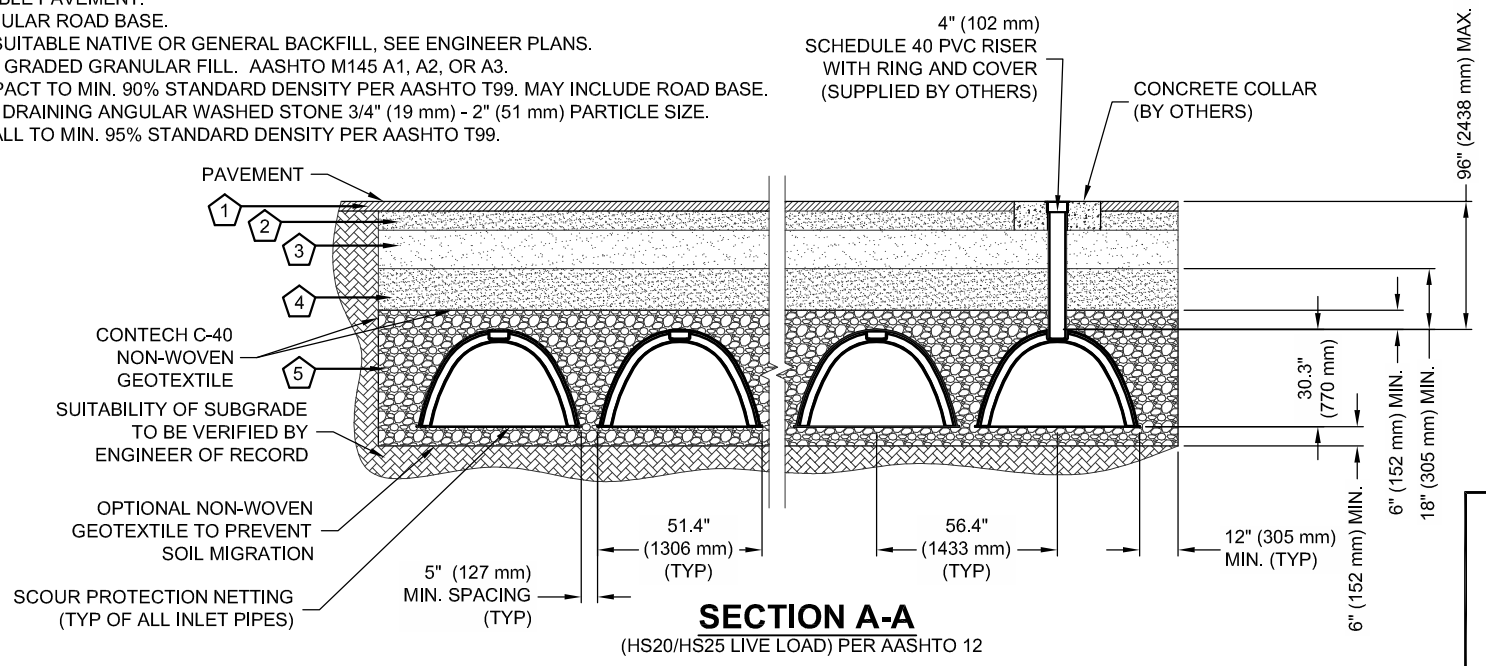
GENERAL NOTES

- ALL ELEVATIONS, DIMENSIONS AND LOCATIONS OF RISERS AND INLETS SHALL BE VERIFIED BY THE ENGINEER OF RECORD.
- PRIOR TO INSTALLATION OF THE CHAMBERMAXX SYSTEM A PRE-CONSTRUCTION MEETING SHALL BE CONDUCTED. THOSE REQUIRED TO ATTEND ARE THE SUPPLIER OF THE SYSTEM, THE GENERAL CONTRACTOR, SUB-CONTRACTORS AND THE ENGINEER.
- CHAMBERMAXX CHAMBERS ARE MANUFACTURED FROM POLYPROPYLENE PLASTIC.
- CHAMBERMAXX SYSTEM TO MEET AASHTO HS20/HS25 LIVE LOADING, PER AASHTO LRFD SECTION 12.
- ACCESS COVERS TO MEET AASHTO HS20/HS25 LIVE LOADING.
- MINIMUM COVER IS 18-INCHES (457 mm) AND MAXIMUM COVER IS 96-INCHES (2438 mm) TO BOTTOM OF FLEXIBLE PAVEMENT OR TO TOP OF RIGID PAVEMENT. FOR COVER HEIGHTS GREATER THAN 96-INCHES (2438 mm) CONTACT YOUR LOCAL REPRESENTATIVE.
- ALL PARTS PROVIDED BY CONTECH UNLESS OTHERWISE NOTED.
- FOR INFORMATION ON PRE-TREATMENT SYSTEMS, REFERENCE CONTECH PRE-TREATMENT SYSTEM STANDARD DETAILS OR CONTACT YOUR LOCAL REPRESENTATIVE.
- CHAMBERMAXX BY CONTECH CONSTRUCTION PRODUCTS (800) 925-5240

INSTALLATION NOTES

- CHAMBERMAXX INSTALLATION GUIDE TO BE REVIEWED BY CONTRACTOR PRIOR TO INSTALLATION.
- PRIOR TO PLACING BEDDING, THE FOUNDATION MUST BE CONSTRUCTED TO A UNIFORM AND STABLE GRADE. IN THE EVENT THAT UNSUITABLE FOUNDATION MATERIALS ARE ENCOUNTERED DURING EXCAVATION, A TENSAR BX GEOGRID SHALL BE UTILIZED OR UNSUITABLE MATERIAL SHALL BE REMOVED AND BROUGHT BACK TO GRADE WITH FILL MATERIAL AS APPROVED BY THE ENGINEER OF RECORD. ONCE THE FOUNDATION PREPARATION IS COMPLETE, THE BEDDING MATERIAL CAN BE PLACED.
- THE SCOUR PROTECTION NETTING TO EXTEND 1'-0" (305 mm) BEYOND OUTSIDE EDGE OF INLET CHAMBERS.
- COVER ANY OPEN VOID SPACES GREATER THAN 3/4" (19 mm) ON CHAMBERS WITH A NON-WOVEN GEOTEXTILE TO PREVENT INFILTRATION OF BACKFILL MATERIAL.
- STONE EMBEDMENT MATERIAL SHALL BE INSTALLED TO 95% STANDARD PROCTOR DENSITY AND PLACED IN 6-INCH (152 mm) TO 8-INCH (203 mm) LIFTS SUCH THAT THERE IS NO MORE THAN A TWO LIFT DIFFERENTIAL BETWEEN ANY OF THE CHAMBERS AT ANY TIME. GRANULAR BACKFILL MATERIAL SHALL BE COMPACTED TO 90% SPD. BACKFILLING SHALL BE ADVANCED ALONG THE LENGTH OF THE CHAMBER ROWS AT THE SAME RATE TO AVOID DIFFERENTIAL LOADING AND DISPLACEMENT OF THE CHAMBERS. THE MINIMUM CHAMBER SPACING MUST BE MAINTAINED.
- REFER TO CHAMBERMAXX INSTALLATION GUIDE FOR TEMPORARY CONSTRUCTION LOADING GUIDELINES.
- IT IS ALWAYS THE CONTRACTOR'S RESPONSIBILITY TO FOLLOW OSHA GUIDELINES FOR SAFE PRACTICES.
- GENERAL INSTALLATION METHODS AND MATERIALS TO BE IN ACCORDANCE WITH ASTM D2321.

- KEY**
- FLEXIBLE PAVEMENT.
 - GRANULAR ROAD BASE.
 - ANY SUITABLE NATIVE OR GENERAL BACKFILL, SEE ENGINEER PLANS.
 - WELL GRADED GRANULAR FILL. AASHTO M145 A1, A2, OR A3. COMPACT TO MIN. 90% STANDARD DENSITY PER AASHTO T99. MAY INCLUDE ROAD BASE.
 - FREE DRAINING ANGULAR WASHED STONE 3/4" (19 mm) - 2" (51 mm) PARTICLE SIZE. INSTALL TO MIN. 95% STANDARD DENSITY PER AASHTO T99.



CHAMBERMaxx®
PATENT PENDING

CONTECH®
CONSTRUCTION PRODUCTS INC.
www.contech-cpi.com
9025 Centre Pointe Dr., Suite 400, West Chester, OH 45069
800-338-1122 513-645-7000 513-645-7993 FAX

**CHAMBERMAXX STORMWATER RETENTION
STANDARD DETAIL
PRE-TREATMENT STRUCTURE OPTION**