

GREATER NEW HAVEN WATER POLLUTION CONTROL AUTHORITY

260 EAST STREET PARKING LOT IMPROVEMENTS PROJECT

PROJECT SSF 2015-06

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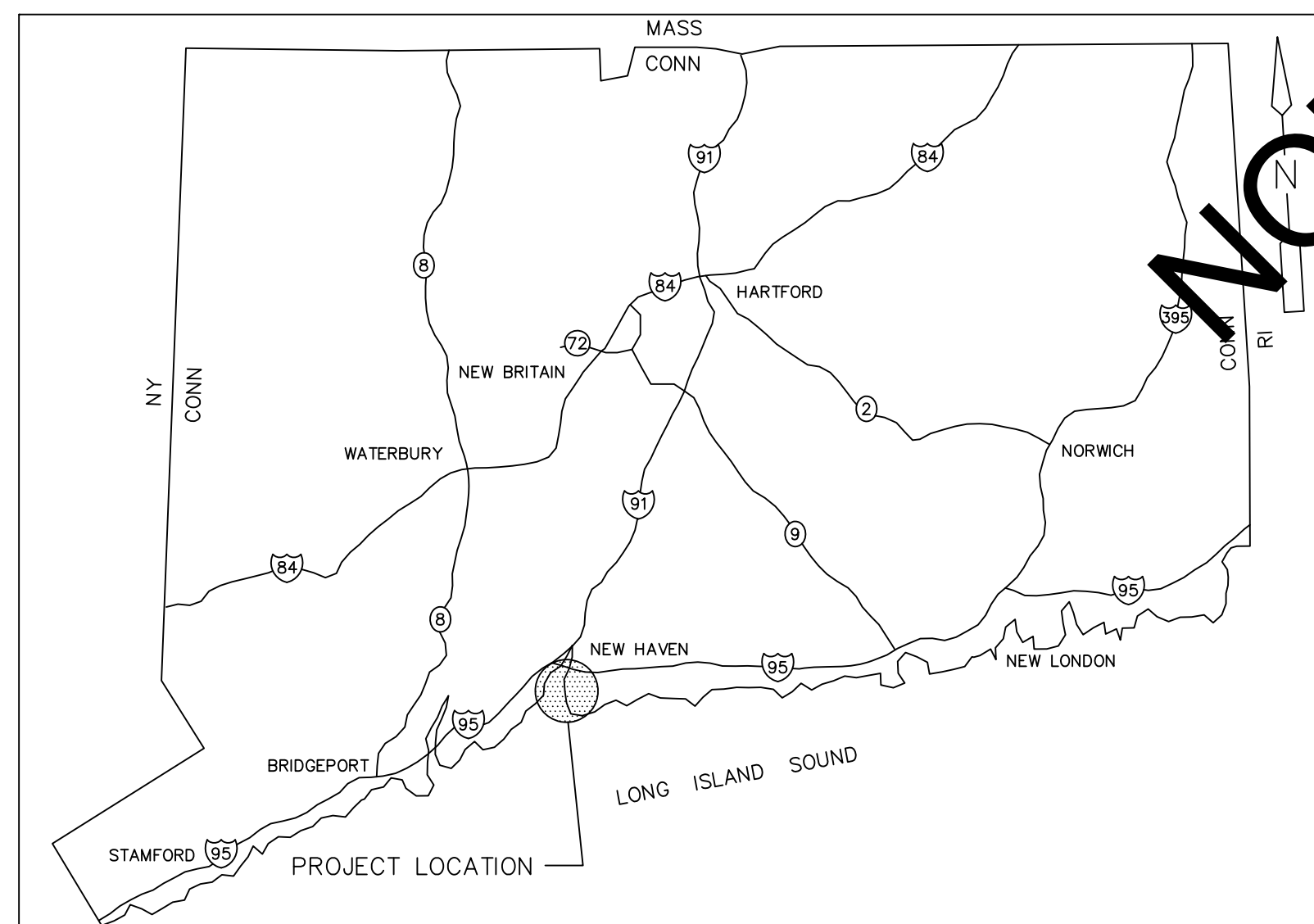
GARY ZRELAK



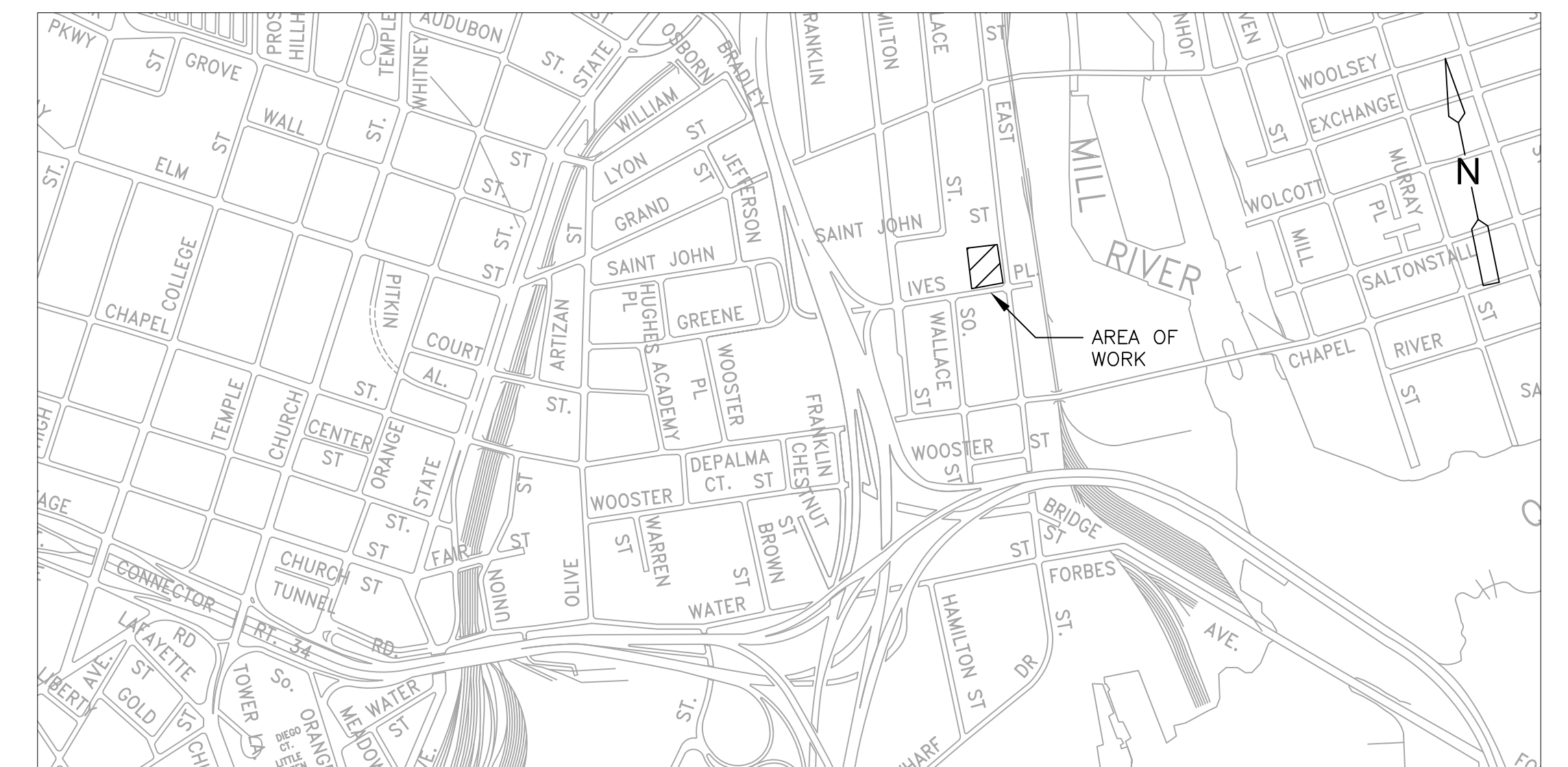
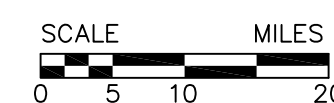
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 JULY 2016

LIST OF DRAWINGS

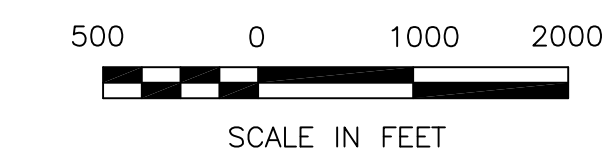
<u>SHEET NO.</u>	<u>TITLE</u>
1	TITLE SHEET
2	GENERAL NOTES
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4	GRADING PLAN
5	DRAINAGE PLAN
6	PARKING LOT PAVEMENT MARKINGS
7	PAVEMENT MAKING DETAILS
8	BIOSWALE DETAILS
9	NYLOPLAST DRAINAGE DETAILS (1)
10	NYLOPLAST DRAINAGE DETAILS (2)



VICINITY PLAN



LOCATION PLAN



GENERAL NOTES:

1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE GNHWP/CA STANDARD SPECIFICATIONS, THE CONTRACT DOCUMENTS AND THE STANDARD CONSTRUCTION DETAILS UNLESS OTHERWISE NOTED.
2. THE CONTRACT SHALL BE PAID AT THE "LUMP SUM" PRICE FOR "260 EAST STREET PARKING LOT REHABILITATION" FOR ALL WORK AS DESCRIBED IN SECTION 102.16 "2. SCOPE OF WORK" IN ITS ENTIRETY AS SHOWN ON THE CONTRACT DRAWINGS, SPECIAL SPECIFICATIONS AND NOTES, AND GNHWP/CA STANDARD SPECIFICATIONS.
3. THE CONTRACTOR SHALL VERIFY ALL EXISTING INVERT ELEVATIONS BEFORE THE BEGINNING OF CONSTRUCTION ACTIVITIES. THE CONTRACTOR SHALL ALSO VERIFY THE LOCATION OF THE EXISTING STORM SEWER PIPE WHERE THE PROPOSED SYSTEM CONNECTS.
4. INFORMATION CONCERNING EXISTING UNDERGROUND UTILITIES WAS OBTAINED FROM AVAILABLE RECORDS. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION AND ELEVATION OF EXISTING UTILITIES PRIOR TO CONSTRUCTION.
5. THE CONTRACTOR MUST MAINTAIN ALL SEDIMENT CONTROL DEVICES DURING CONSTRUCTION OF THE PROJECT. THE CONTRACTOR SHALL PREVENT TRACKING OF MUD AND DUST ONTO PUBLIC ROADS OR AFFECTING ADJACENT AREAS.
6. THE CONTRACTOR SHALL PLUG ALL PIPES LEFT ABANDONED AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER.
7. EXCAVATED MATERIAL DEEMED UNSUITABLE FOR BACKFILLING BY THE ENGINEER SHALL BE REMOVED FROM THE JOB SITE IN ACCORDANCE WITH THE SPECIAL PROVISIONS.
8. GRANULAR FILL USED FOR BACKFILLING SHALL BE PLACED IN ACCORDANCE WITH ITEM 205 AND ITEM 213 OF THE STANDARD SPECIFICATIONS.
9. TRENCHES SHALL BE COVERED FOR ANY PERIODS OF INACTIVITY.
10. CONTROLLED LOW STRENGTH MATERIAL (CLSM) SHALL BE USED TO FILL ABANDONED STORM SEWER PIPES AS DIRECTED BY THE ENGINEER. EXISTING PIPES SHALL BE PLUGGED AND THE SECTIONS FILLED WITH CLSM. IT IS THE CONTRACTOR'S RESPONSIBILITY TO FLOW FILL PIPES EVENLY.
11. BASED ON THE HISTORY OF THE SITE THE CONTRACTOR MAY ENCOUNTER OLD CONCRETE/BRICK FOUNDATIONS DURING EXCAVATION. THE COST OF EXCAVATING THESE CONCRETE/BRICK STRUCTURES WILL BE INCLUDED IN THE BID UNIT PRICE OF THE ITEM "ROCK EXCAVATION".
12. THE CONTRACTOR SHALL VERIFY ALL QUANTITIES PRIOR TO BIDDING.
13. ALL PARKING STALLS SHALL BE 9' WIDE BY 18' IN LENGTH. HANDICAP PARKING SPACES SHALL BE AS SHOWN ON THE PLANS AND STANDARD DETAILS.
14. ALL PAVING CURBS AND STRUCTURES SHALL BE LAID OUT BY THE CONTRACTOR AND APPROVED BY THE ENGINEER PRIOR TO CONSTRUCTION.
15. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ACCESS AND EGRESS TO THE BUILDING AT ALL TIMES. WORK ADJACENT TO THE BUILDING SHALL BE COORDINATED WITH THE ENGINEER.
16. SAFE AND EFFICIENT PEDESTRIAN ACCESS SHALL BE MAINTAINED.
17. THE CONTRACTOR WILL BE SOLELY AND COMPLETELY RESPONSIBLE FOR THE CONDITIONS OF THE JOB SITE, INCLUDING THE SAFETY OF ALL PERSONS AND PROPERTY DURING PERFORMANCE OF THE WORK. THIS REQUIREMENT WILL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS.
18. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DESIGN AND CONSTRUCTION OF PROPER SHORING OF TRENCHES IN ACCORDANCE WITH OCCUPATIONAL SAFETY LAWS. THE DUTIES OF THE ENGINEER DO NOT INCLUDE REVIEW OF THE ADEQUACY OF THE CONTRACTOR'S SAFETY IN, ON, OR NEAR THE CONSTRUCTION SITE.
19. SHOULD IT APPEAR THAT THE WORK TO BE DONE, OR ANY MATTER RELATIVE THERETO, IS NOT SUFFICIENTLY DETAILED OR EXPLAINED ON THESE PLANS, CONTRACTOR SHALL CONTACT THE ENGINEER FOR SUCH FURTHER EXPLANATION.

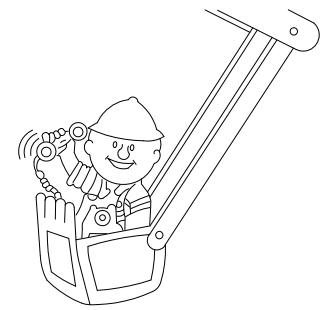
REFERENCE DRAWINGS:

MAPPING INCLUDED THE SURVEY CONDUCTED BY CRISCUOLO ENGINEERING, OCTOBER, 2009. THE SURVEY AND MAP WERE PREPARED IN ACCORDANCE WITH SECTIONS 20-300b-1 THRU 20-300b-20 OF THE REGULATIONS OF CONNECTICUT STATE AGENCIES - "MINIMUM STANDARDS FOR SURVEYS AND MAPS IN THE STATE OF CONNECTICUT" AS ENDORSED BY THE CONNECTICUT ASSOCIATION OF LAND SURVEYORS, INC. ON SEPT. 26, 1996 BEING A PROPERTY AND TOPOGRAPHIC SURVEY BASED ON A COMPILATION OF MAP REFERENCE 4A CONFORMING TO HORIZONTAL ACCURACY CLASS "D" AND TOPOGRAPHY TO CLASS T-2. NORTH ARROW AND BEARINGS ARE BASED ON MAP REFERENCE 4A (NAD 27)

VERTICAL DATUM IS N.G.V.D. 29 BASED ON TOWN MONUMENT #18 WITH A PUBLISHED ELEVATION OF 20.477.

KEY CONTACTS:

AMOS BARNES
SOUTH CONNECTICUT GAS COMPANY
855 MAIN STREET
BRIDGEPORT, CT 06604
PHONE: (203)795-7654




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REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: _____	RC
DRAWN BY: _____	RC
SHEET CHK'D BY: _____	TVS
CROSS CHK'D BY: _____	
APPROVED BY: _____	TVS
DATE: _____	09/14/2015

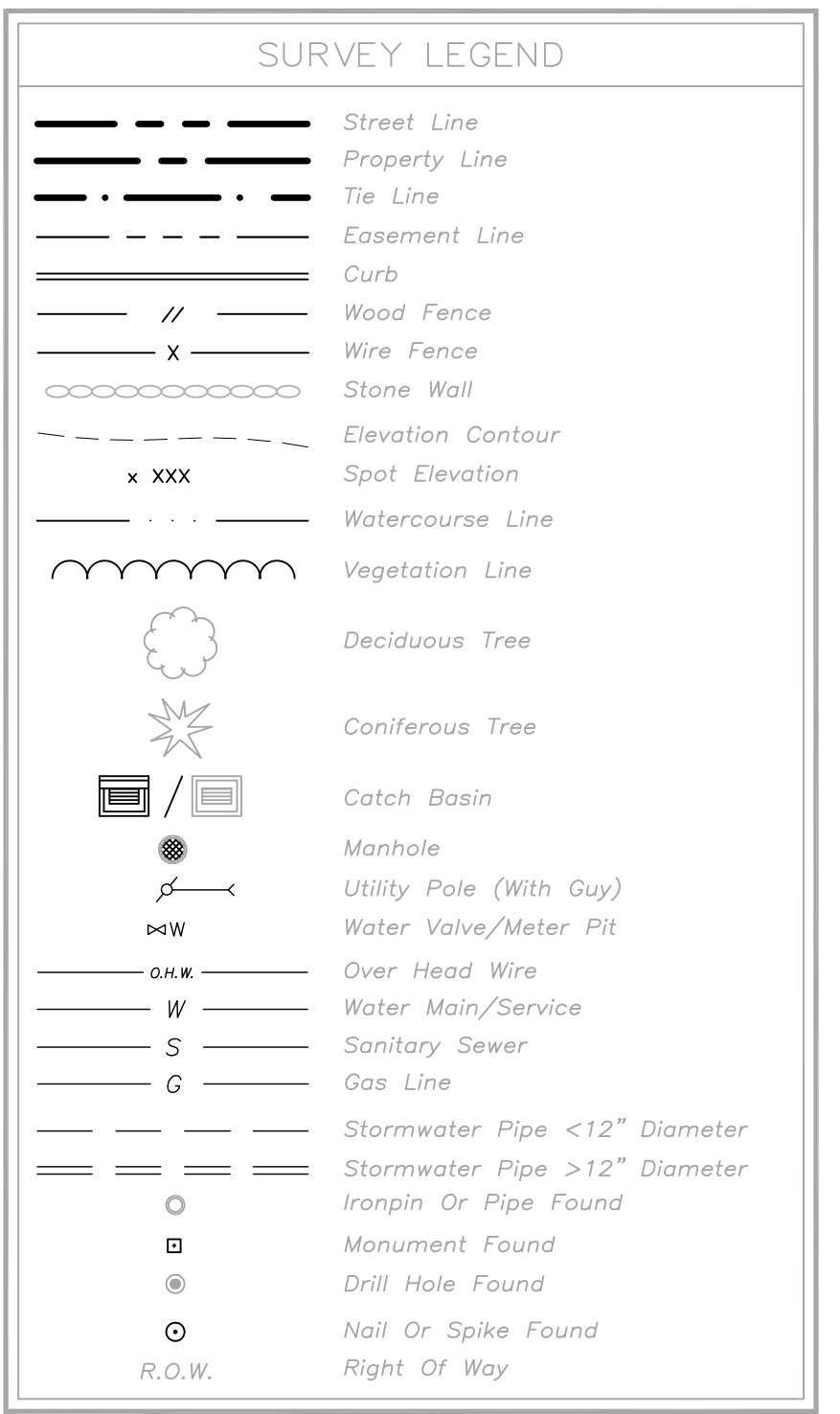
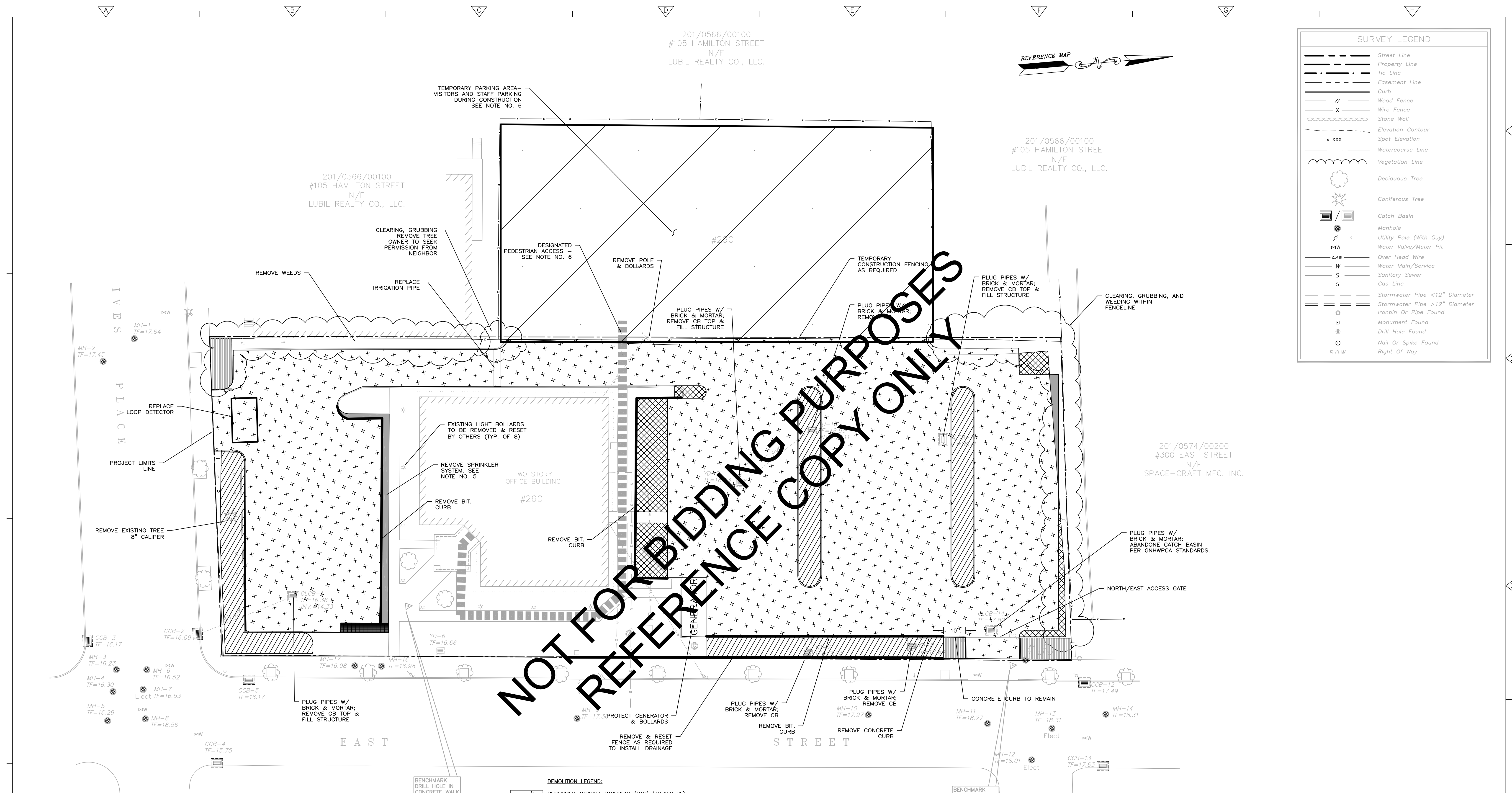


Greater New Haven Water Pollution Control Authority
260 East Street
New Haven, CT 06511
(203) 466-5280 p (203) 772-1564 f
www.gnhwpca.com

GREATER NEW HAVEN WATER POLLUTION CONTROL AUTHORITY
260 EAST STREET
PARKING LOT IMPROVEMENTS

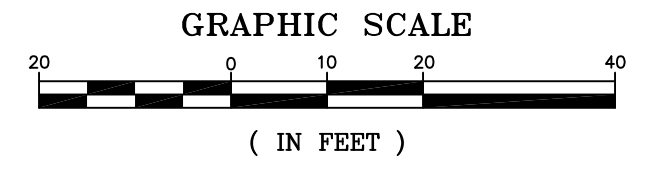
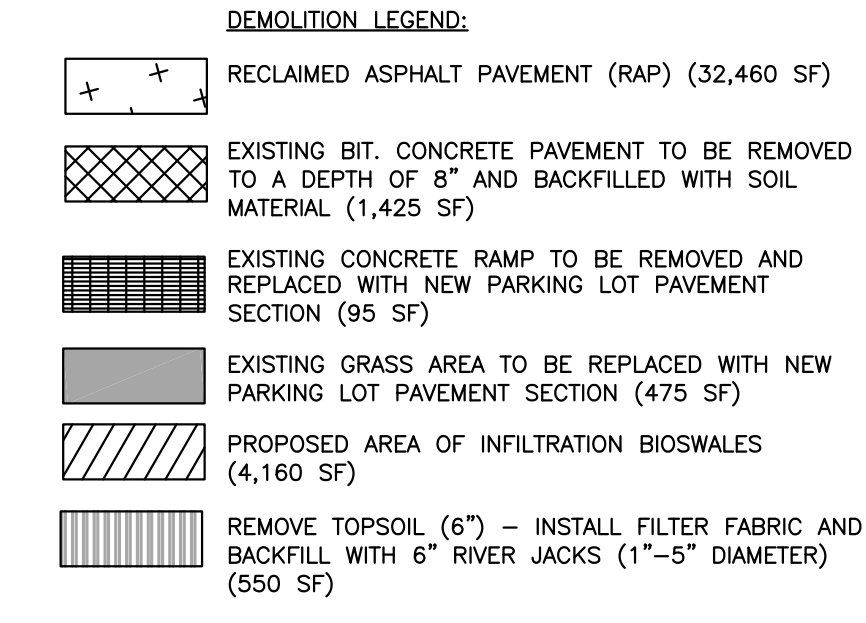
GENERAL NOTES

PROJECT NO. _____	SSP 2015-06
FILE NAME: _____	PARKING
SHEET NO. _____	
2 _____	OF 10
SCALE: _____	
	1"=20'



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- SITE PREPARATION / DEMOLITION NOTES:**
- AFTER EXCAVATION OF THE BIOSWALE AREAS, THOSE AREAS SHALL BE FENCED OFF WITH SILT FENCE UNTIL PROJECT COMPLETION TO PREVENT COMPACTION OF THE SUBGRADE, DIRT TRACKING ONTO ANY LAYER OF THE FACILITY AND STOCKPILING OF CONSTRUCTION MATERIALS THAT MAY CLOG THE SURFACE.
 - NORTH/EAST ACCESS GATE MAY BE USED DURING STAGE CONSTRUCTION FOR ACCESS TO TEMPORARY PARKING OR THE ENTRANCE OF CONSTRUCTION VEHICLES.
 - REMOVE AND RESET EXISTING FENCE AS REQUIRED TO INSTALL DRAINAGE SYSTEM.
 - CONTRACTOR SHALL SECURE THE SITE AT THE END OF EACH WORK DAY TO PREVENT UNRESTRICTED ACCESS BY PEDESTRIANS OR VEHICLES FROM THE STREET.
 - ABANDON/REMOVE SPRINKLER SYSTEM IN THIS AREA. CONTRACTOR SHALL CAP THE SYSTEM AT THE LIMITS OF REMOVAL.
 - CONTRACTOR SHALL MAINTAIN CONTINUOUS ACCESS TO TEMPORARY PARKING AREA AND MAINTAIN ACCESS FOR PEDESTRIANS TO THE BUILDING.
 - CONTRACTOR SHALL MAINTAIN A SAFE CONSTRUCTION AREA DURING WORK HOURS.



DESIGNED BY:	RC
DRAWN BY:	RC
SHEET CHK'D BY:	TVS
CROSS CHK'D BY:	TVS
APPROVED BY:	TVS
DATE:	09/14/2015

REV. NO.	DATE	DRWN	CHKD	REMARKS

GNHWPCA
Protecting the Environment

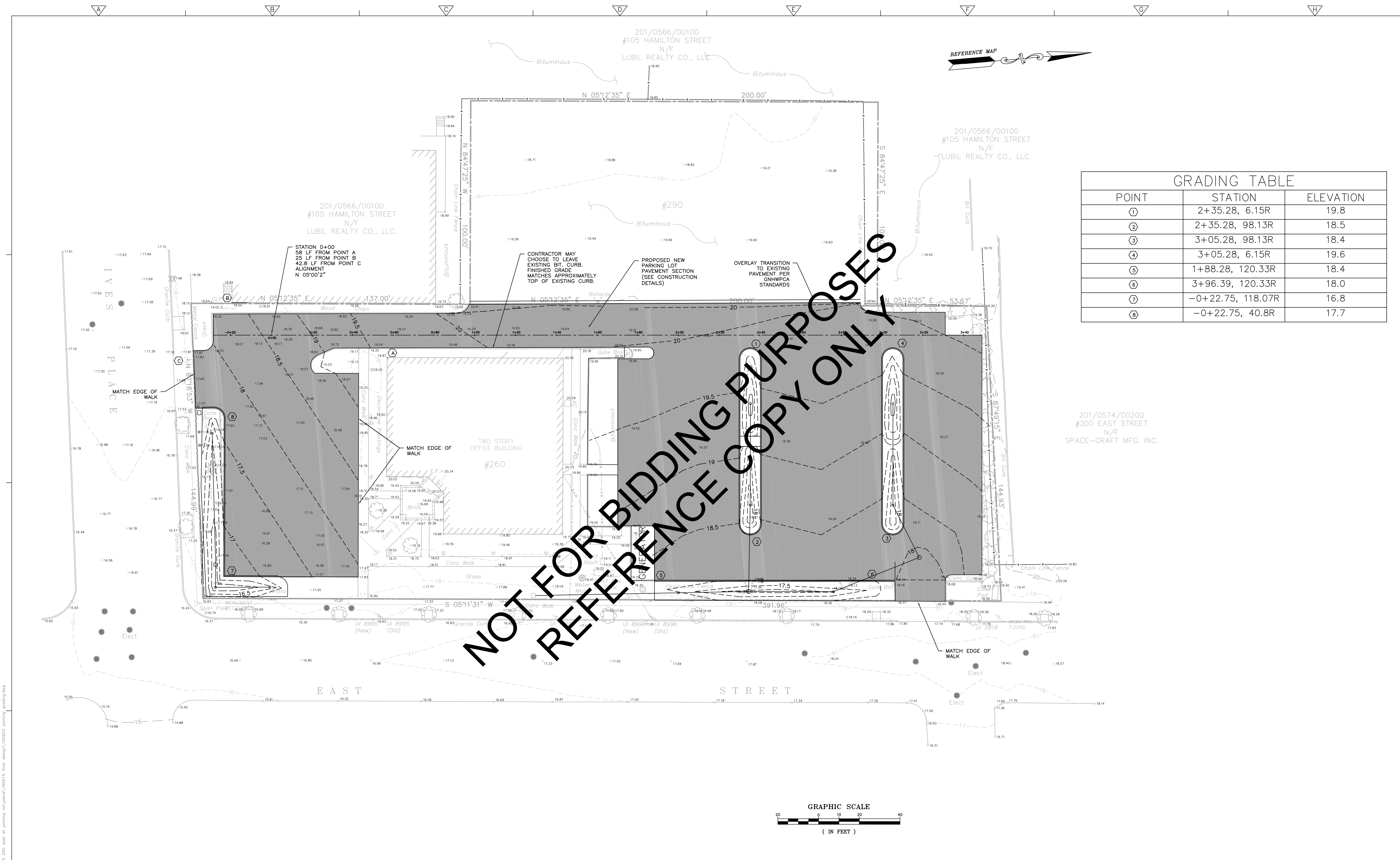
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GREATER NEW HAVEN WATER POLLUTION CONTROL AUTHORITY

260 EAST STREET
PARKING LOT IMPROVEMENTS

DEMOLITION PLAN

PROJECT NO.	SSF 2015-06
FILE NAME:	DEMOLITION
SHEET NO.	3 OF 10
SCALE:	1"=20'



GRADING TABLE		
POINT	STATION	ELEVATION
①	2+35.28, 6.15R	19.8
②	2+35.28, 98.13R	18.5
③	3+05.28, 98.13R	18.4
④	3+05.28, 6.15R	19.6
⑤	1+88.28, 120.33R	18.4
⑥	3+96.39, 120.33R	18.0
⑦	-0+22.75, 118.07R	16.8
⑧	-0+22.75, 40.8R	17.7

REV. NO.	DATE	DRWN	CHKD	REMARKS

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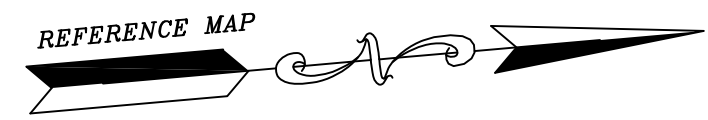


GREATER NEW HAVEN WATER POLLUTION CONTROL AUTHORITY
 260 EAST STREET
 PARKING LOT IMPROVEMENTS

PARKING LOT
 GRADING PLAN

PROJECT NO.	SSF 2015-06
FILE NAME:	GRADING
SHEET NO.	4 OF 10
SCALE:	1"=20'

201/0566/00100
#105 HAMILTON STREET
N/F
LUBIL REALTY CO., LLC.



201/0566/00100
#105 HAMILTON STREET
N/F
LUBIL REALTY CO., LLC.

201/0566/00100
#105 HAMILTON STREET
N/F
LUBIL REALTY CO., LLC.

SURVEY LEGEND	
	Street Line
	Property Line
	Tie Line
	Easement Line
	Curb
	Wood Fence
	Wire Fence
	Stone Wall
	Elevation Contour
	Spot Elevation
	Watercourse Line
	Vegetation Line
	Deciduous Tree
	Coniferous Tree
	Catch Basin
	Manhole
	Utility Pole (With Guy)
	Water Valve/Meter Pit
	Over Head Wire
	Water Main/Service
	Sanitary Sewer
	Gas Line
	Stormwater Pipe <12" Diameter
	Stormwater Pipe >12" Diameter
	Ironpin Or Pipe Found
	Monument Found
	Drill Hole Found
	Nail Or Spike Found
	R.O.W.

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BIOSWALE NO. 1
10' X 90'
SEE DETAIL SHEET NO. 8
(TYP)

BIOSWALE NO. 2
10' X 90'

64' - 6" HEAVY DUTY
SINGLE WALL PERFORATED
HDPE UNDERDRAIN
SLOPE = 0.8%

STA -0+28 48R
8" NYLOPLAST
DRAIN BASIN
W/18" SUMP
INV= 14.62

STA -0+27 112R
24" NYLOPLAST
DRAIN BASIN
W/ GRATE COVER
TF= 17.8
INV= 14.07 (8" PVC)
INV= 14.10 (6" HDPE)
INV= 14.10 (6" HDPE)
BOTTOM ELEV.= 12.57

11' - 6" HEAVY DUTY
SINGLE WALL PERFORATED
HDPE UNDERDRAIN
SLOPE = 1%

BIOSWALE NO. 4
Area = 1,235 sf

STA 2+00 126R
10" NYLOPLAST
INLINE DRAIN
INV= 14.87

STA 2+35.41 87.47R
8" NYLOPLAST
DRAIN BASIN
W/18" SUMP
INV= 15.34 (6" HDPE)
INV= 15.34 (6" HDPE)

50' - 6" HEAVY DUTY
SINGLE WALL PERFORATED
HDPE UNDERDRAIN
SLOPE = 0.8%

STA 3+05.33 33.61R
8" NYLOPLAST
DRAIN BASIN
W/18" SUMP
INV= 15.88 (6" HDPE)

STA 3+05.33 87.47R
8" NYLOPLAST
DRAIN BASIN
W/18" SUMP
INV= 15.48 (6" HDPE)
INV= 15.48 (8" HDPE)

28.8' - 8" HDPE PIPE ADS N-12
SLOPE = 0.8%

42.4' - 8" HDPE PIPE ADS N-12
SLOPE = 0.8%

STA 3+18.31 109.19R
24" DRAIN BASIN WITH
2X3 ROAD & HIGHWAY GRATE
TF= 17.7
INV= 15.25 (8" HDPE)
INV= 15.25 (10" HDPE)
BOTTOM ELEV.= 13.74

45.4' - 10" HDPE PIPE ADS N-12
SLOPE = 0.3%

STA -0+01 123R
8" NYLOPLAST
DRAIN BASIN
W/18" SUMP
INV= 14.47

EXISTING 10" RCP
INV= 14.00
INV= 14.66 (10" RCP)
INV= 14.66 (10" HDPE)
BOTTOM ELEV.= 10.33

70' - 10" HDPE PIPE ADS N-12
SLOPE = 0.3%

STA -0+27 123R
8" NYLOPLAST
DRAIN BASIN
W/18" SUMP
INV= 14.21

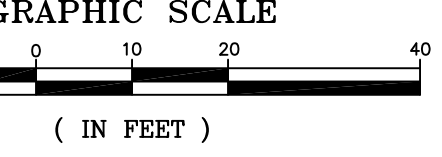
26' - 6" HEAVY DUTY
SINGLE WALL PERFORATED
HDPE UNDERDRAIN
SLOPE = 1%

34.5' - 10" HEAVY DUTY
SINGLE WALL PERFORATED
HDPE UNDERDRAIN
SLOPE = 0.3%

STA 2+34.5 126R
10" NYLOPLAST
DRAIN BASIN
W/ DOME GRATE COVER
TF= 17.8
INV N= 14.98 (10" HDPE)
INV W= 14.98 (8" HDPE)
INV S= 14.98 (10" HDPE)
BOTTOM ELEV.= 13.48

41.6' - 10" HEAVY DUTY
SINGLE WALL PERFORATED
HDPE UNDERDRAIN
SLOPE = 0.3%

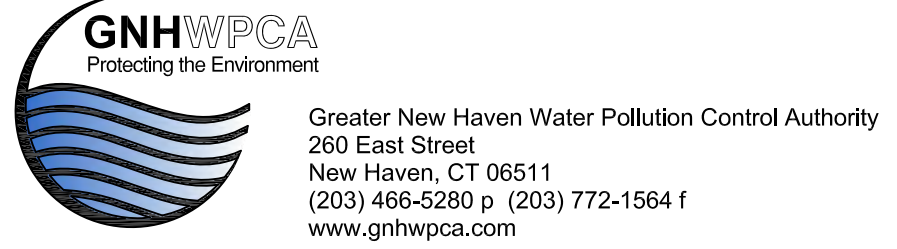
STA 2+92.5 126R
10" NYLOPLAST
DRAIN BASIN
W/ DOME GRATE COVER
TF= 17.8
INV N= 15.11 (10" HDPE)
INV S= 15.11 (10" HDPE)
BOTTOM ELEV.= 13.61



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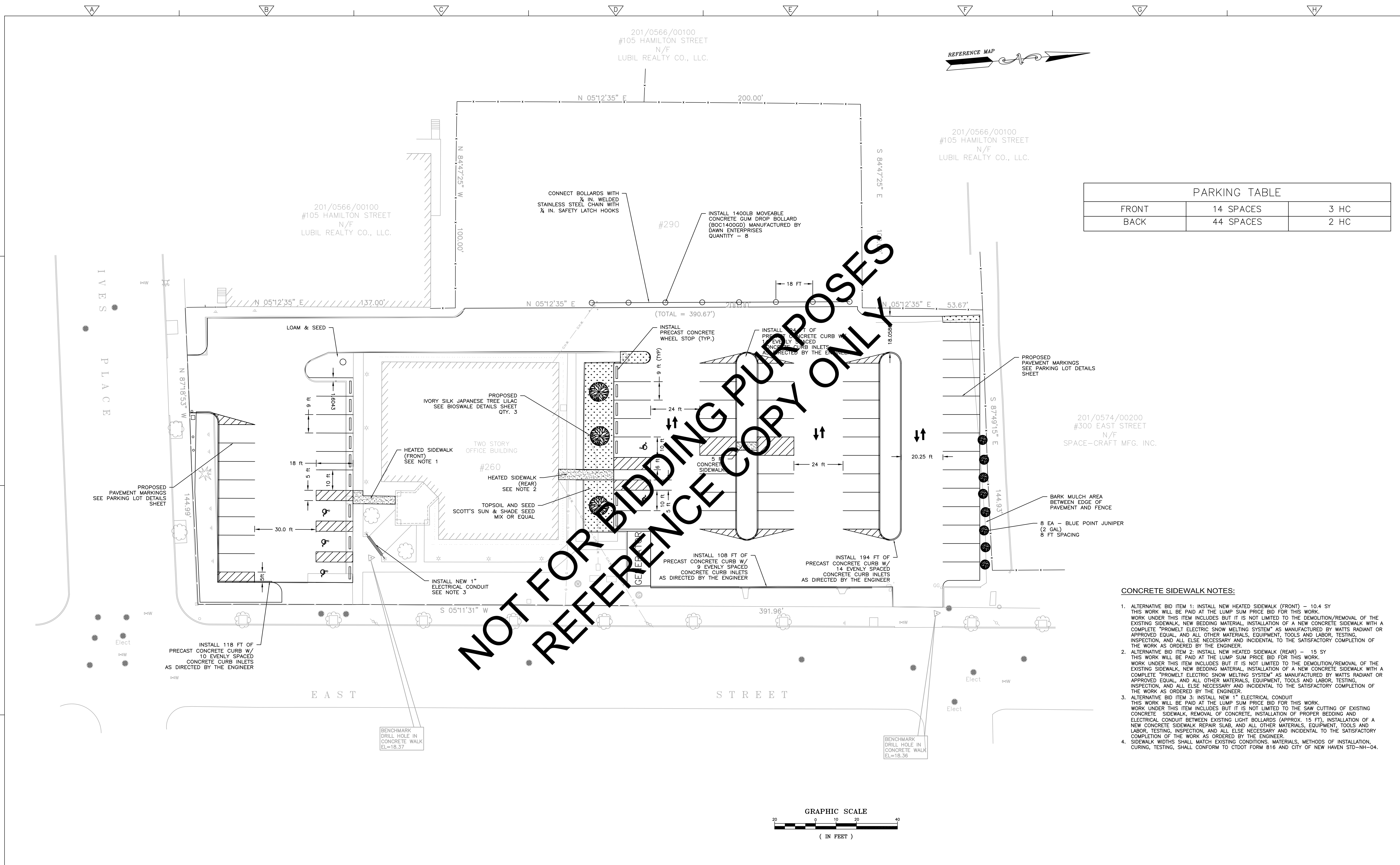
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SHEET CHK'D BY: _____ TVS
CROSS CHK'D BY: _____
APPROVED BY: _____ TVS
DATE: 09/14/2015



GREATER NEW HAVEN WATER POLLUTION CONTROL AUTHORITY
260 EAST STREET
PARKING LOT IMPROVEMENTS

DRAINAGE PLAN

PROJECT NO.	SSF 2015-06
FILE NAME:	DRAINAGE
SHEET NO.	5 OF 10
SCALE:	1"=20'



PARKING TABLE		
FRONT	14 SPACES	3 HC
BACK	44 SPACES	2 HC

- CONCRETE SIDEWALK NOTES:**
- ALTERNATIVE BID ITEM 1: INSTALL NEW HEATED SIDEWALK (FRONT) - 10.4 SY. THIS WORK WILL BE PAID AT THE LUMP SUM PRICE BID FOR THIS WORK. WORK UNDER THIS ITEM INCLUDES BUT IS NOT LIMITED TO THE DEMOLITION/REMOVAL OF THE EXISTING SIDEWALK, NEW BEDDING MATERIAL, INSTALLATION OF A NEW CONCRETE SIDEWALK WITH A COMPLETE "PROMELT" ELECTRIC SNOW MELTING SYSTEM AS MANUFACTURED BY WATTS RADIANT OR APPROVED EQUAL, AND ALL OTHER MATERIALS, EQUIPMENT, TOOLS AND LABOR, TESTING, INSPECTION, AND ALL ELSE NECESSARY AND INCIDENTAL TO THE SATISFACTORY COMPLETION OF THE WORK AS ORDERED BY THE ENGINEER.
 - ALTERNATIVE BID ITEM 2: INSTALL NEW HEATED SIDEWALK (REAR) - 15 SY. THIS WORK WILL BE PAID AT THE LUMP SUM PRICE BID FOR THIS WORK. WORK UNDER THIS ITEM INCLUDES BUT IS NOT LIMITED TO THE DEMOLITION/REMOVAL OF THE EXISTING SIDEWALK, NEW BEDDING MATERIAL, INSTALLATION OF A NEW CONCRETE SIDEWALK WITH A COMPLETE "PROMELT" ELECTRIC SNOW MELTING SYSTEM AS MANUFACTURED BY WATTS RADIANT OR APPROVED EQUAL, AND ALL OTHER MATERIALS, EQUIPMENT, TOOLS AND LABOR, TESTING, INSPECTION, AND ALL ELSE NECESSARY AND INCIDENTAL TO THE SATISFACTORY COMPLETION OF THE WORK AS ORDERED BY THE ENGINEER.
 - ALTERNATIVE BID ITEM 3: INSTALL NEW 1" ELECTRICAL CONDUIT. THIS WORK WILL BE PAID AT THE LUMP SUM PRICE BID FOR THIS WORK. WORK UNDER THIS ITEM INCLUDES BUT IS NOT LIMITED TO THE SAW CUTTING OF EXISTING CONCRETE SIDEWALK, REMOVAL OF CONCRETE, INSTALLATION OF PROPER BEDDING AND ELECTRICAL CONDUIT BETWEEN EXISTING LIGHT BOLLARDS (APPROX. 15 FT), INSTALLATION OF A NEW CONCRETE SIDEWALK REPAIR SLAB, AND ALL OTHER MATERIALS, EQUIPMENT, TOOLS AND LABOR, TESTING, INSPECTION, AND ALL ELSE NECESSARY AND INCIDENTAL TO THE SATISFACTORY COMPLETION OF THE WORK AS ORDERED BY THE ENGINEER.
 - SIDEWALK WIDTHS SHALL MATCH EXISTING CONDITIONS. MATERIALS, METHODS OF INSTALLATION, CURING, TESTING, SHALL CONFORM TO CTDOT FORM 816 AND CITY OF NEW HAVEN STD-NH-04.

REV. NO.	DATE	DRWN	CHKD	REMARKS

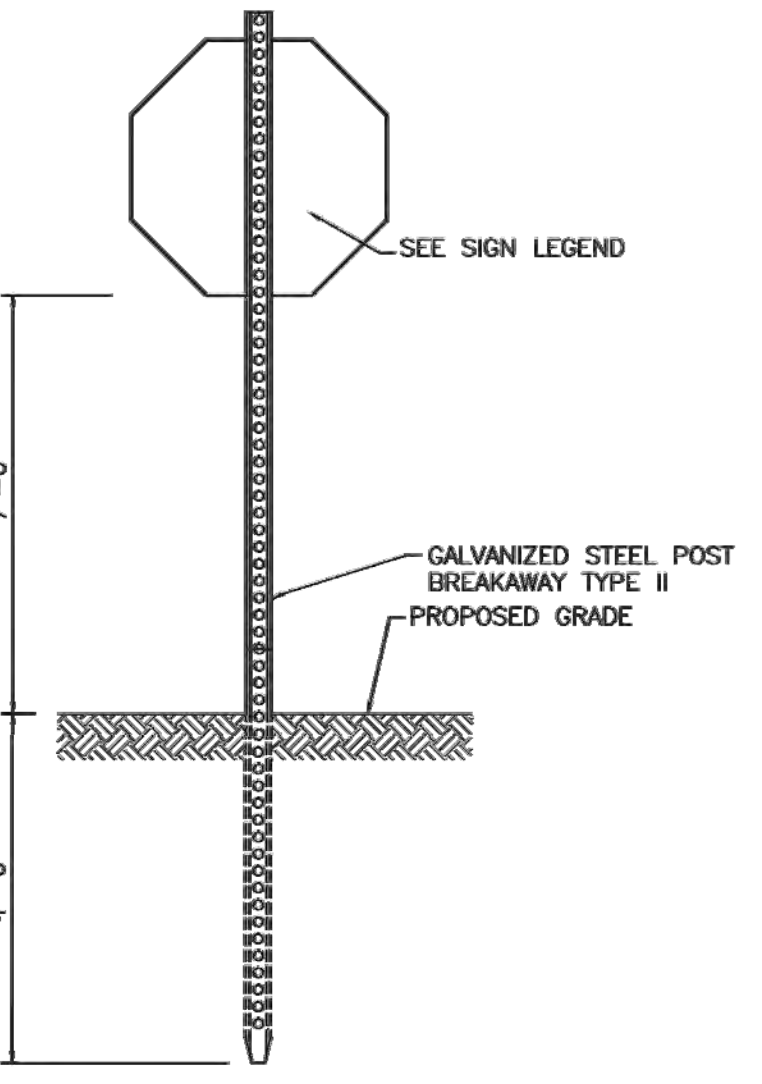
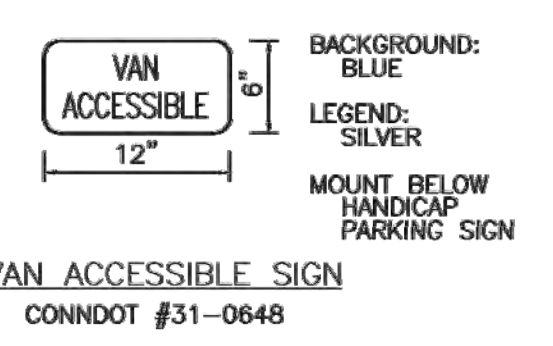
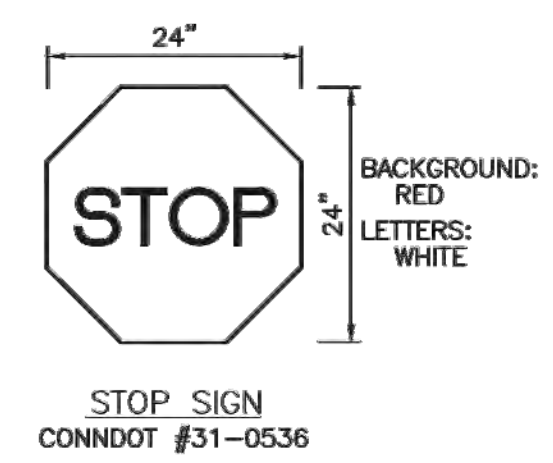
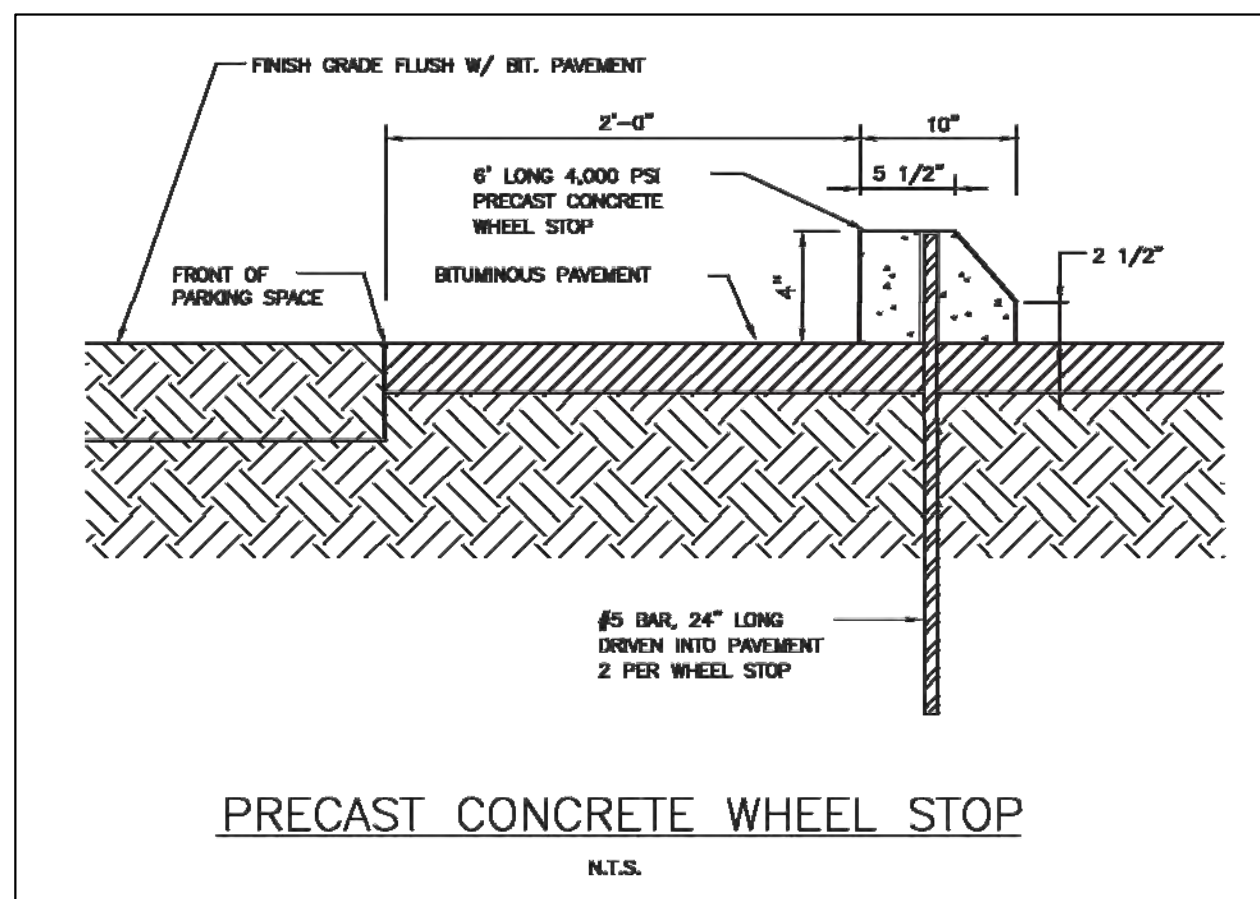
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 260 EAST STREET
 PARKING LOT IMPROVEMENTS

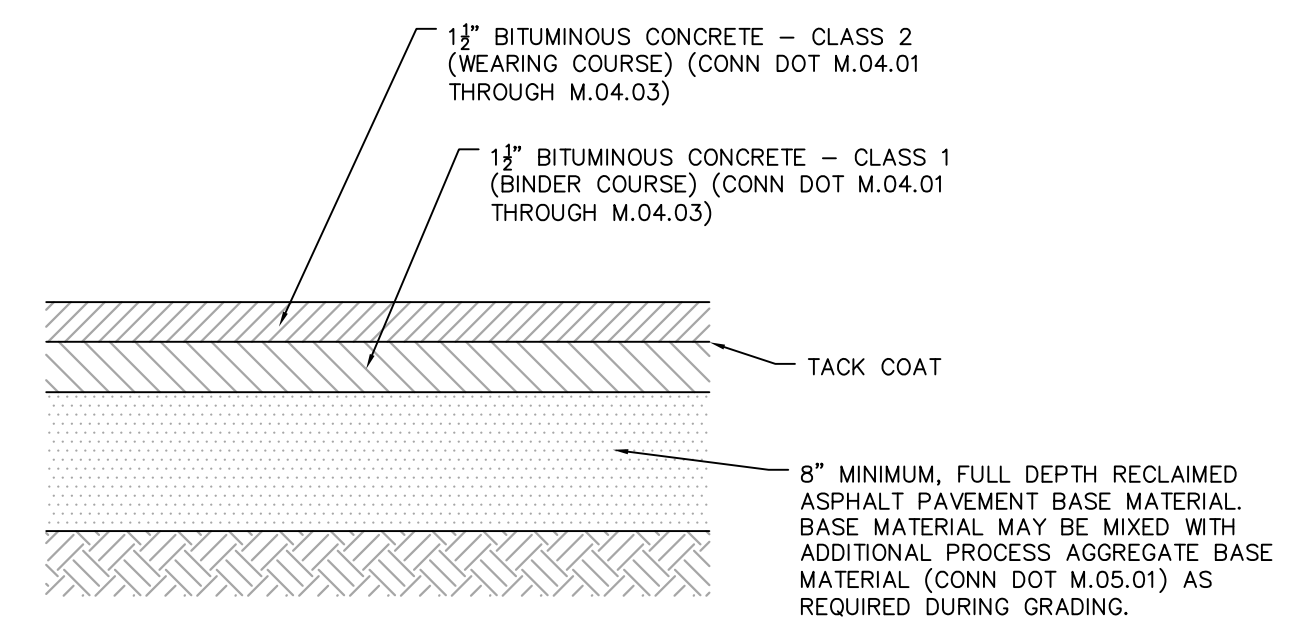
PARKING LOT
 PAVEMENT MARKINGS

PROJECT NO.	SSF 2015-06
FILE NAME:	PARKING
SHEET NO.	6 OF 10
SCALE:	1"=20'

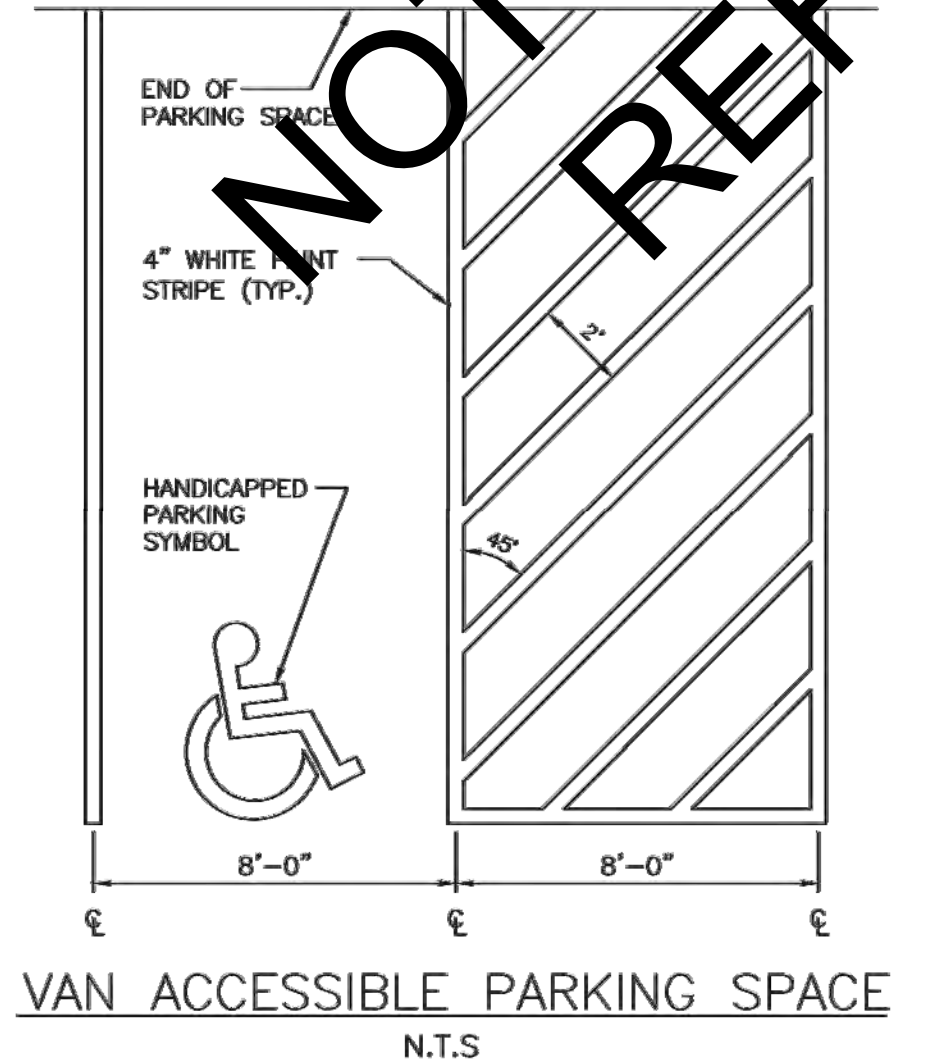
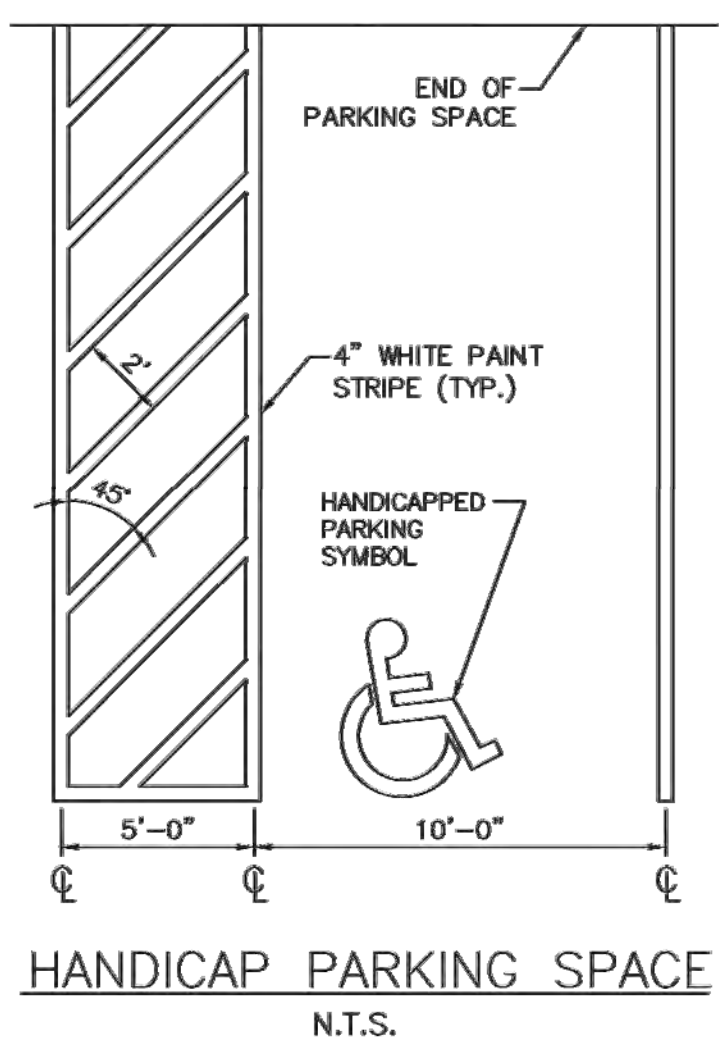
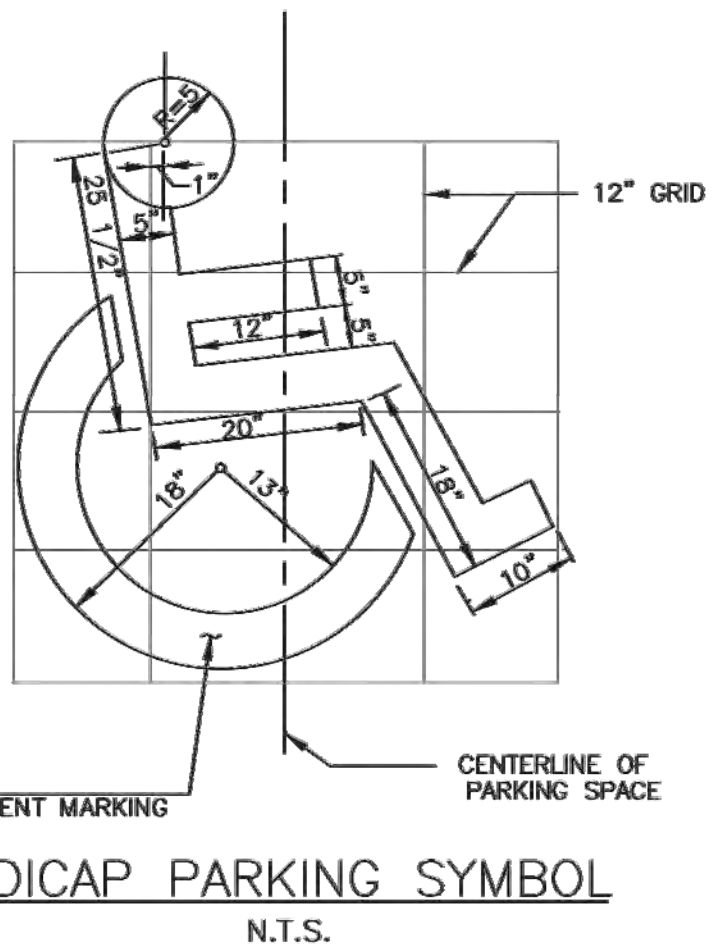
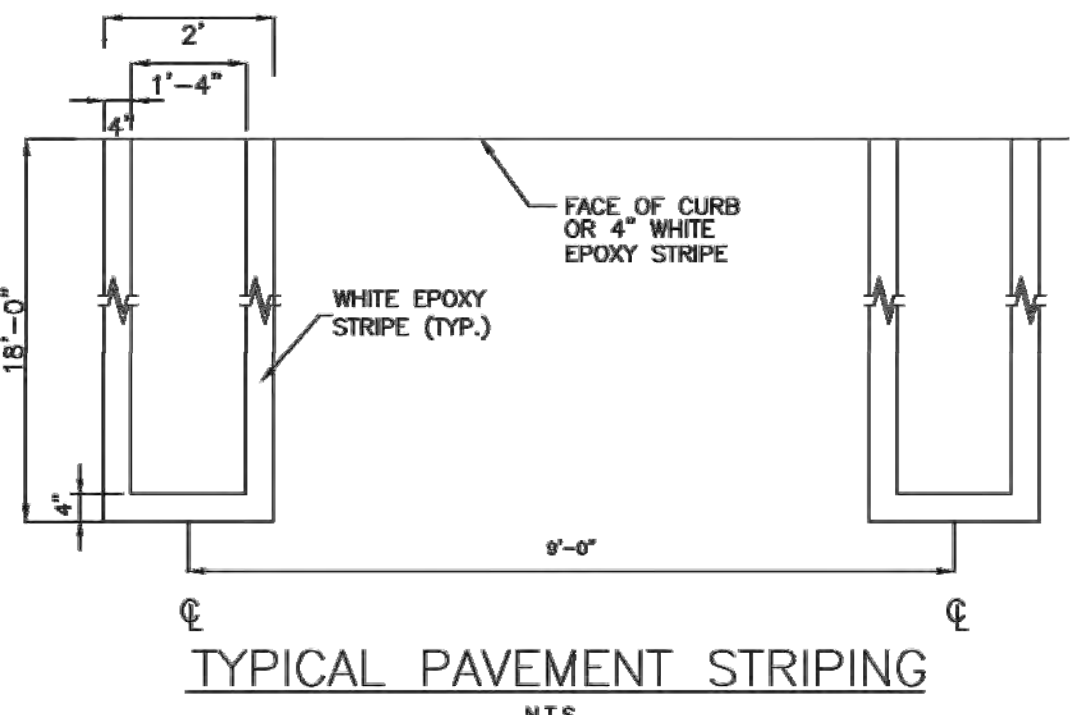
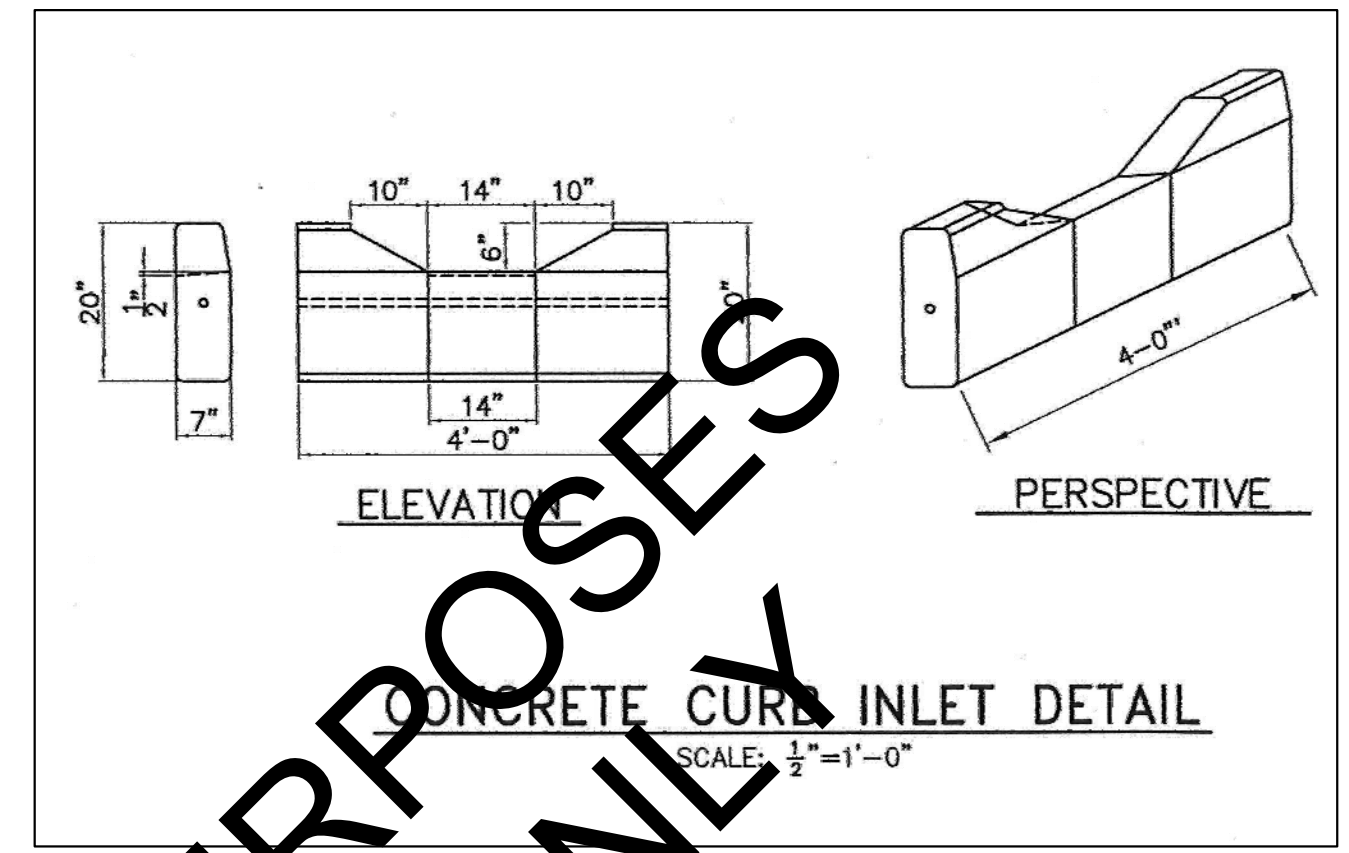


STOP SIGN
N.T.S.

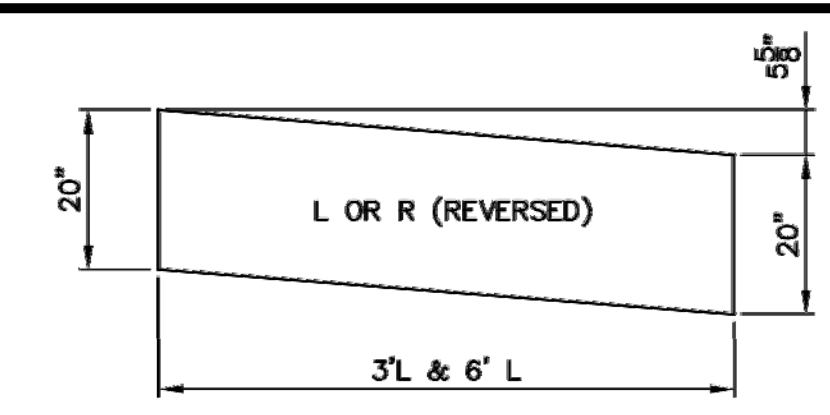
NOTES:
1. MOUNTING DETAILS SHALL BE IN ACCORDANCE WITH CONNDOT FORM 816 M.18
2. FOR MORE INFORMATION ON INSTALLATION, SEE CONNDOT STANDARD SHEET 1206-B "TYPICAL METAL SIGN POSTS AND SIGN MOUNTING DETAILS"



- NOTES:
1. ALL PAVED AREAS SHALL HAVE A MINIMUM OF 8" OF RECLAIMED ASPHALT PAVEMENT BASE MATERIAL BENEATH THE BINDER COURSE.
 2. IN THE AREAS OF FILL, PROCESS AGGREGATE BASE MATERIAL SHALL BE USED TO ACHIEVE PROPER GRADES.
 3. ALL MATERIALS SHALL BE COMPACTED TO NO LESS THAN 95 PERCENT OF THE DRY DENSITY FOR THE SOIL WHEN TESTED IN ACCORDANCE WITH ASSHTO T160 METHOD D.



CONCRETE CURBING
20" HIGH WITH SQUARED EDGE FINISH.
STANDARD FEATURES:
DOWEL LIFT HOLE: 1" DIA. x 4" DEPTH
CONTINUOUS REINFORCEMENT
MEETS CONNECTICUT DOT SPECIFICATIONS



RADIUS	NO. PIECES REQ./CIRCLE
2'	4
3'	4
5'	8
10'	16
15'	24
20'	32
25'	40
30'	48
35'	56

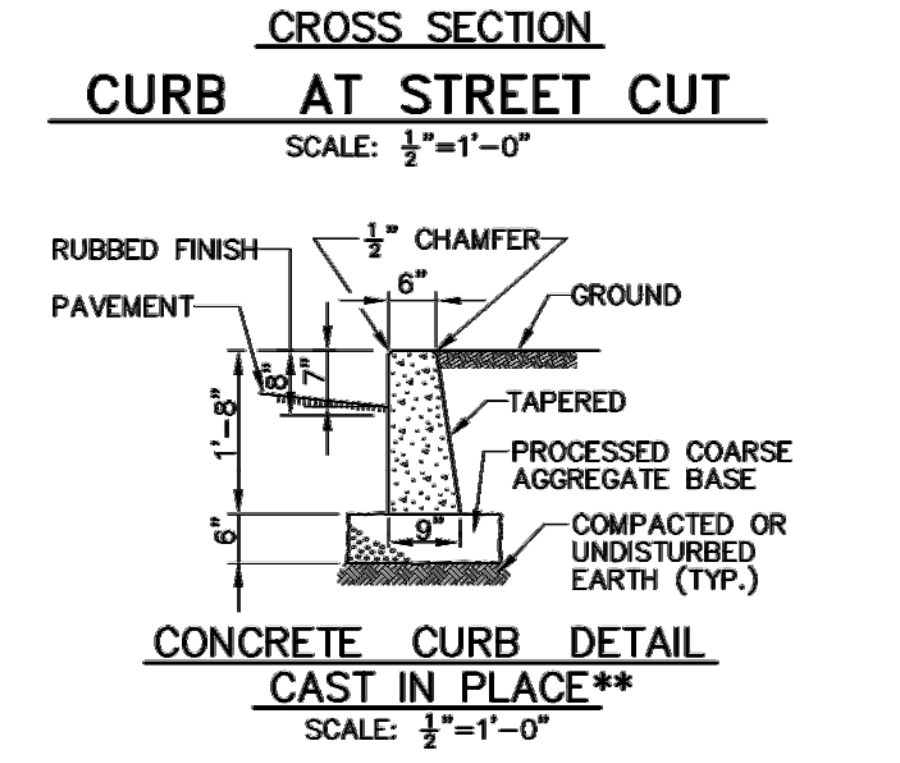
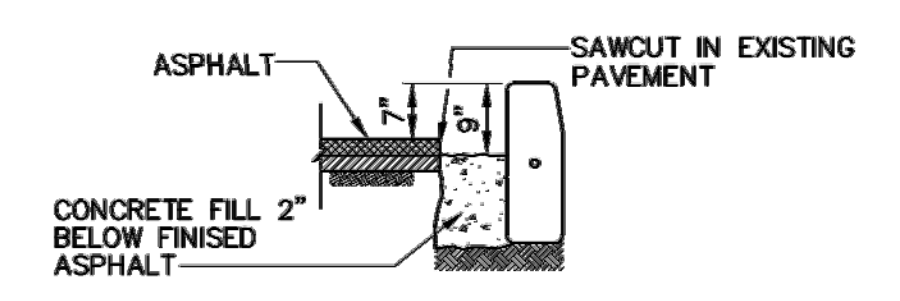
TRANSITION END
DIMENSIONS:
20" H x 6" WIDE (TOP) x 7" W (BASE)
STANDARD RADII:
4' LENGTHS CAN BE ASSEMBLES TO FORM THE FOLLOWING RADII:
2', 3', 5', 10', 15', 20', 25', 30' AND 35'.

CONCRETE CURB DETAIL PRECAST**
NOT TO SCALE

- SPECIFICATIONS:**
1. CONCRETE CURB SHALL BE MANUFACTURED TO MEET CONNECTICUT DOT SPECIFICATIONS.
 2. CONCRETE STRENGTH - 5000 psi.
 3. WEIGHT - 135 LBS/LINEAR FOOT.
 4. REINFORCED WITH 2-#3 DEFORMED REINFORCED BARS.
 5. AIR ENTRAINMENT - 5-7%.
 6. 2x6 REBAR - CONNECTING PINS.

CITY OF NEW HAVEN
DEPARTMENT OF ENGINEERING
RICHARD H. MILLER, P.E., L.S. 9886
CITY ENGINEER

DATE: DES. 1, 2009
PROJECT NO. STD-NH-02B



TYPICAL CONCRETE CURBING DETAILS
SCALE: 1/2"=1'-0"

- NOTES:**
1. ALL PIECES SHALL BE 6'-0" LONG EXCEPT FOR CLOSURES WHERE NO PIECE LESS THAN 4'-0" LONG SHALL BE USED.
 2. CURBS OF RADIUS LESS THAN 100' SHALL BE CUT OR CAST TO REQUIRED RADIUS AND LENGTH.
 3. USE 1/2" PREFORMED EXPANSION JOINT FILLER SPACED NOT MORE THAN 20'-0" O.C. FOR PRECAST OR CAST-IN-PLACE CONCRETE CURB.
 4. JOINT BETWEEN GRANITE OR CONCRETE SECTIONS ARE NOT TO EXCEED 1/2".
 5. MINIMUM WIDTH OF CURB AT BOTTOM SHALL BE 4" OR NO GREATER THAN 1/3 THE HEIGHT OF THE PIECE.
 6. CLASS "C" AE CONCRETE TO BE PLACED AT JOINTS AS SHOWN IN GRANITE CURB DETAIL.
- **NOTE:**
TO BE USED ONLY IN AREAS AS APPROVED BY THE CITY ENGINEER.

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: RC
DRAWN BY: RC
SHEET CHK'D BY: TYS
CROSS CHK'D BY: TYS
APPROVED BY: TYS
DATE: 09/14/2015

GNHWPCA
Protecting the Environment
Greater New Haven Water Pollution Control Authority
260 East Street
New Haven, CT 06511
(203) 466-5280 p (203) 772-1564 f
www.gnhwpc.com

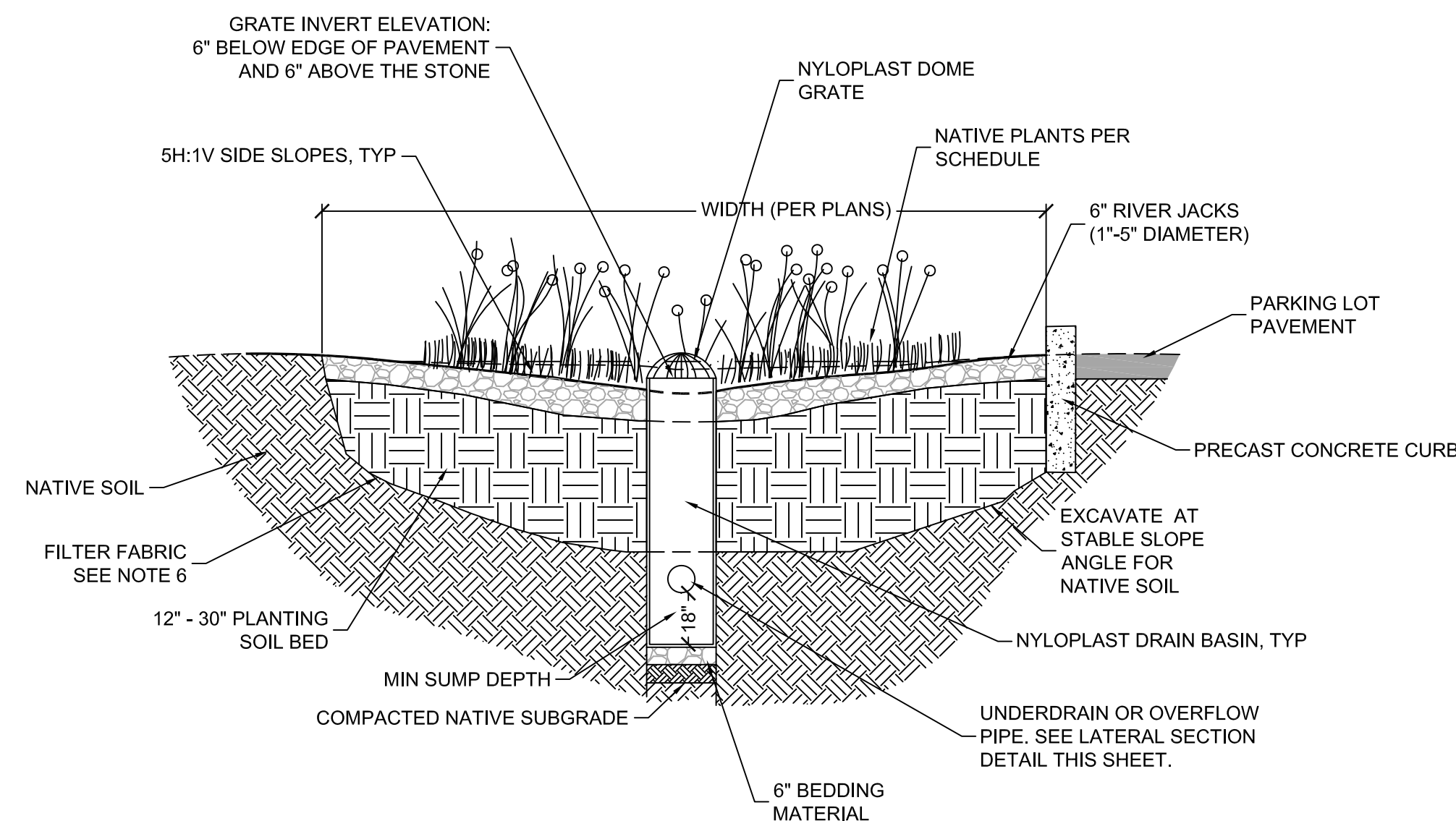
GREATER NEW HAVEN WATER POLLUTION CONTROL AUTHORITY
260 EAST STREET
PARKING LOT IMPROVEMENTS

PARKING LOT
DETAILS

PROJECT NO. SSF 2015-06
FILE NAME: PARKING DETAILS

SHEET NO.	OF
7	10

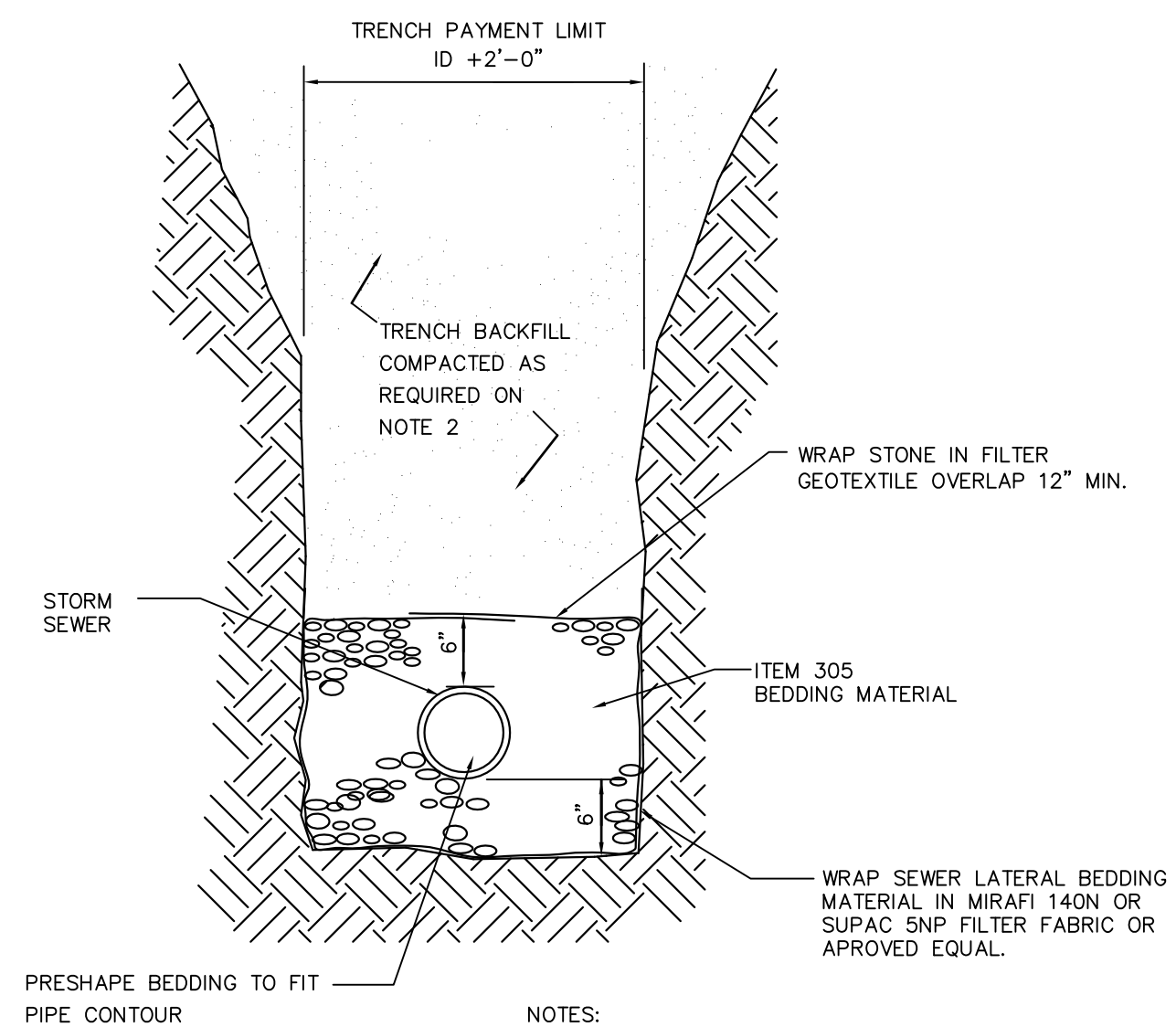
SCALE:
N.T.S.



BIOSWALE
NTS

PLANTING SOIL BED MIX SPECIFICATIONS

- SOIL BED MIX SHALL HAVE THE FOLLOWING CHARACTERISTICS:
 - 50/50 SAND/LOAM MIXTURE
 - SOIL INFILTRATION CAPACITY OF AT LEAST 1 FOOT PER DAY
- SOIL MIX SHOULD BE UNIFORMLY MIXED WITH A SOIL MIXER.
- PLACEMENT OF PLANTING SOIL MIX SHALL OCCUR PER THE FOLLOWING GUIDELINES:
 - PLACE SOIL IN 12" LIFTS, KEEPING MACHINERY OUTSIDE OF INFILTRATION AREA.
 - DO NOT PLACE SOILS IF SATURATED.
 - COMPACT EACH LIFT WITH WATER OR BOOT PACKING UNTIL JUST SATURATED TO 85% COMPACTION. DO NOT COMPACT WITH HEAVY MACHINERY OR VIBRATORY COMPACTION.



- NOTES:
- MAXIMUM PAY WIDTH PER BEDDING MATERIAL & TRENCH EXCAVATION IS I.D. + 2'-0"
 - BEDDING AND BACKFILL MATERIAL SHALL BE COMPACTED TO 95% OF THE MAXIMUM DRY DENSITY EXCEPT WITHIN BIOSWALES.

TRENCH SECTION
STORM SEWER PIPE
NTS

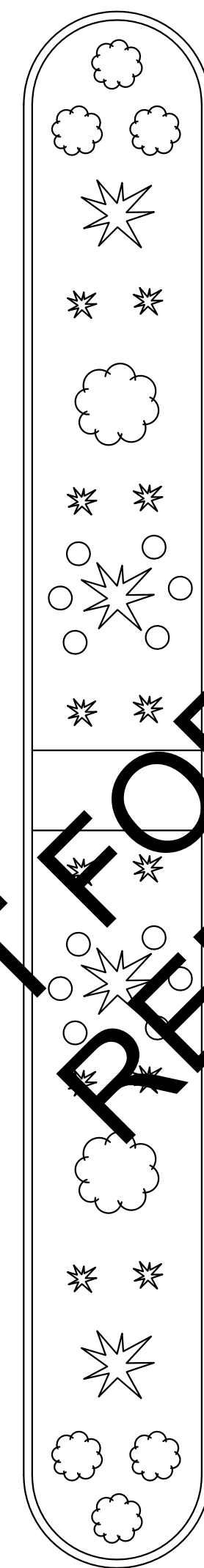
CONSTRUCTION NOTES:

- BUILD AND VEGETATE BIOSWALE AS EARLY AS POSSIBLE TO ESTABLISH PLANTINGS BEFORE DIRECTING STORMWATER RUNOFF TO IT OR DIVERT STORMWATER AROUND FACILITY.
- VEGETATION: SEE PLANT SCHEDULE BELOW.
- INFILTRATION AREAS (THE AREA OF BIOSWALE AS DEFINED BY THE TOP ELEVATION OF THE FACILITY) SHALL BE FENCED OFF FROM THE FIRST DAY OF CONSTRUCTION UNTIL PROJECT COMPLETION TO PREVENT COMPACTION OF THE SUBGRADE, DIRT TRACKING ONTO ANY LAYER OF THE FACILITY AND STOCKPIILING OF CONSTRUCTION MATERIALS THAT MAY CLOG THE SURFACE.
- DURING EXCAVATION OF NATIVE SOILS TO THE BOTTOM OF THE FACILITY, RAINFALL MAY CAUSE FINES TO CLOG THE SURFACE OF THE FACILITY. IF THE NATIVE SOIL HAS BEEN EXPOSED TO RAINFALL, HAND RAKE THE SURFACE TO A DEPTH OF 2" TO RESTORE INFILTRATION CAPACITY.
- DURING AREA DRAIN INSTALLATION, DISTURB NATIVE SOILS AS LITTLE AS POSSIBLE.
- INSTALL MIRAFI 140N FILTER FABRIC BELOW RIVER JACKS, SURROUNDING PLANTING SOIL AND SEPARATELY SURROUNDING THE UNDERDRAIN PIPE BEDDING MATERIAL.

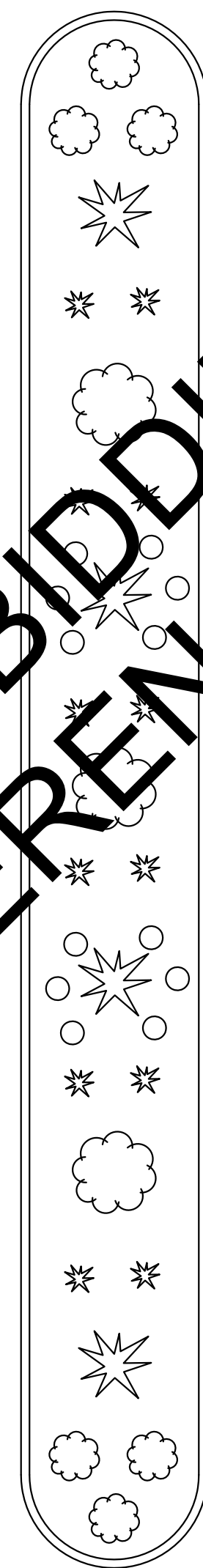
BIOSWALE PLANT SCHEDULE

QUANTITY	KEY	NAME	SIZE
21	☼	CHERRY BOMB JAPANESE BARBERRY - MONOMB	2 - 3 GAL
17	☼	MAIDEN GRASS - MISCANTHUS SINENSIS GRACILLIMUS	2 - 3 GAL
24	☼	ANNA'S MAGIC BALL ARBORVITAE - THUJA OCCIDENTALIS ANNA VAN VLOTEN	2 - 3 GAL
5	☼	DWARF BURNING BUSH - EUONYMUS ALATUS COMPACTUS	5 GAL
9	☼	DWARF ALBERTA SPRUCE - PICEA GLAUCA CONICA COMPACTA	3' - 4' HEIGHT
27	☼	CARSTEN'S WINTERGOLD MUGO PINE - PINUS MUGO CARSTEN'S WINTERGOLD	2 - 3 GAL
24	○	LITTLE BUSINESS DWARF DAYLILY - HEMEROCALLIS X LITTLE BUSINESS	2 - 3 GAL
BACK YARD TREES			
8	●	BLUE POINT JUNIPER	2 GAL
3	☼	IVORY SILK JAPANESE TREE LILAC - SYRINGA RETICULATA IVORY SILK	2 1/2" CALIPER

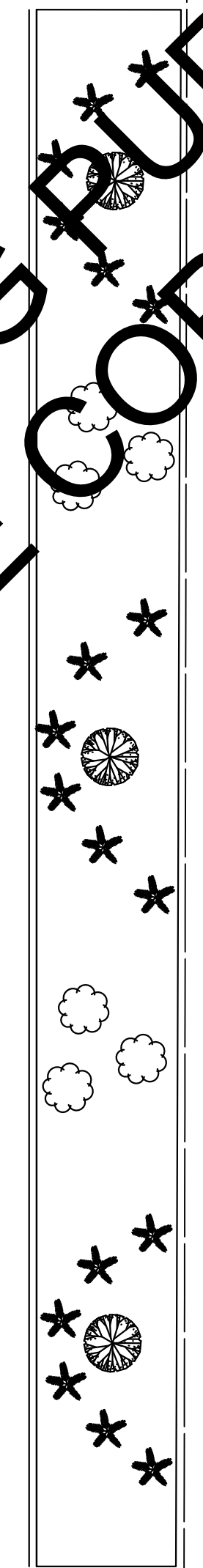
NOT FOR BIDDING PURPOSES
REFERENCE COPY ONLY



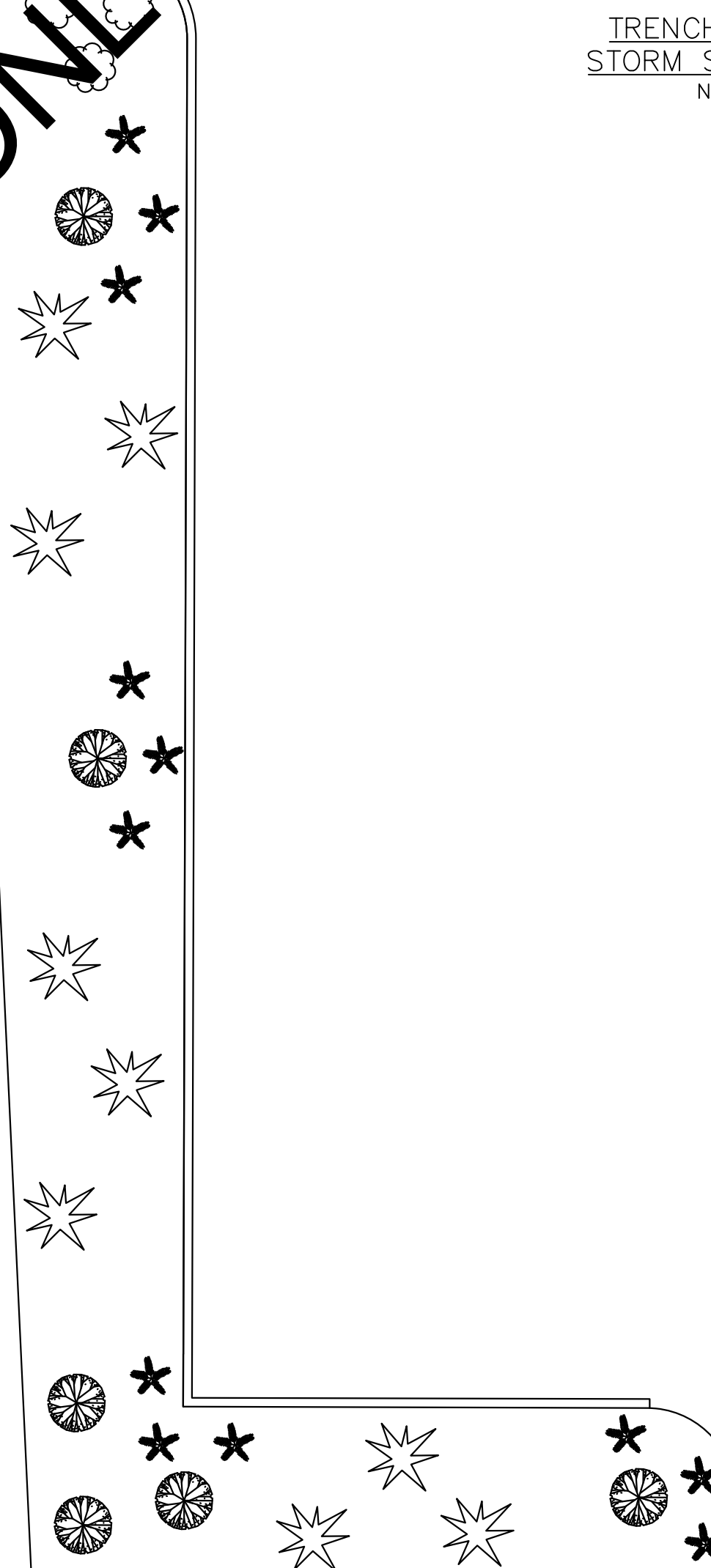
BIOSWALE #1
NTS



BIOSWALE #2
NTS



BIOSWALE #3
NTS



BIOSWALE #4
NTS

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: RC
 DRAWN BY: RC
 SHEET CHK'D BY: TYS
 CROSS CHK'D BY: TYS
 APPROVED BY: TYS
 DATE: 09/14/2015



GREATER NEW HAVEN WATER POLLUTION CONTROL AUTHORITY
 260 EAST STREET
 PARKING LOT IMPROVEMENTS

BIOSWALE
DETAILS

PROJECT NO.	SSF 2015-06
FILE NAME:	BIOSWALE DET
SHEET NO.	8 OF 10
SCALE:	N.T.S.

2808AG_X 8" CUSTOM DRAIN BASIN

(1) DUCTILE IRON GRATE
(2) VARIABLE INVERT HEIGHT
(3) VARIABLE OVERALL HEIGHT

(3,4) VARIOUS TYPES OF INLET & OUTLET ADAPTERS AVAILABLE:
4" - 6" FOR CORRUGATED HOPE (ADS N-12HANCOR DUAL WALL, ADSHANCOR SINGLE WALL), PVC SEWER (EX: SDR 35), PVC DWV (EX: SCH 40), PVC C900/C905, CORRUGATED & RIBBED PVC

2810AG_X 10" CUSTOM DRAIN BASIN

(1) DUCTILE IRON GRATE
(2) VARIABLE INVERT HEIGHT
(3) VARIABLE OVERALL HEIGHT

(3,4) VARIOUS TYPES OF INLET & OUTLET ADAPTERS AVAILABLE:
4" - 10" FOR CORRUGATED HOPE (ADS N-12HANCOR DUAL WALL, ADSHANCOR SINGLE WALL), PVC SEWER (EX: SDR 35), PVC DWV (EX: SCH 40), PVC C900/C905, CORRUGATED & RIBBED PVC

1 - GRATES/COVER SHALL BE DUCTILE IRON PER ASTM A536 GRADE 70-50-05, WITH THE EXCEPTION OF THE BRONZE GRADE.
2 - CUSTOM DRAIN BASIN TO BE CUSTOM MANUFACTURED ACCORDING TO PLAN DETAILS. RESINS ARE NEEDED FOR FINISH OVER BY DUE TO SHIPPING RESTRICTIONS. SEE DRAWING NO. 7005-110-005.
3 - DRAINAGE CONNECTION JOINT TIGHTNESS SHALL CONFORM TO ASTM D3212 FOR CORRUGATED HOPE (ADS N-12HANCOR DUAL WALL) & SDR 35 PVC.
4 - STANDARD DRAIN BASIN HAS FIXED ADAPTER LOCATIONS OF 0" & 30". CUSTOM DRAIN BASIN ADAPTERS CAN BE MOUNTED ON ANY ANGLE 0° TO 30°. TO DETERMINE MINIMUM ANGLE BETWEEN ADAPTERS SEE DRAWING NO. 7005-110-012.
5 - DIMENSIONS ARE FOR REFERENCE ONLY. ACTUAL DIMENSIONS MAY VARY.

GRATE OPTIONS	LOAD RATING	PART #	DRAWING #
STANDARD	LIGHT DUTY	888C032	7005-110-186
SOLED COVER	LIGHT DUTY	888C032	7005-110-189
BRONZE	N/A	888C038	7005-110-200
DOME	N/A	888C033	7005-110-201
DROP IN GRATE	LIGHT DUTY	10818	7005-110-020

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NYLOPLAST 8" DRAIN BASIN: 2808AG_X

(1) DUCTILE IRON GRATE
(2) VARIABLE INVERT HEIGHT
(3) VARIABLE OVERALL HEIGHT

OPTIONAL CONCRETE POUR RING (FOR USE IN SIDEWALK/DECK APPLICATIONS)

CONCRETE WALKWAY OR DECK

THE BACKFILL MATERIAL SHALL BE CRUSHED STONE OR OTHER GRANULAR MATERIAL MEETING THE REQUIREMENTS OF CLASS 1 OR CLASS 2 MATERIAL AS DEFINED IN ASTM D2321. BEDDING & BACKFILL FOR SURFACE DRAINAGE INLETS SHALL BE PLACED & COMPACTED UNIFORMLY IN ACCORDANCE WITH ASTM D2321.

(3) VARIOUS TYPES OF INLET & OUTLET ADAPTERS AVAILABLE:
4" - 8" FOR CORRUGATED HOPE (ADS N-12HANCOR DUAL WALL, ADSHANCOR SINGLE WALL), PVC SEWER (EX: SDR 35), PVC DWV (EX: SCH 40), PVC C900/C905, CORRUGATED & RIBBED PVC

WATERTIGHT JOINT (CORRUGATED HOPE SHOWN)

GRATE OPTIONS

GRATE OPTIONS	LOAD RATING	PART #	DRAWING #
STANDARD	LIGHT DUTY	888C032	7005-110-186
SOLED COVER	LIGHT DUTY	888C032	7005-110-189
BRONZE	N/A	888C038	7005-110-200
DOME	N/A	888C033	7005-110-201
DROP IN GRATE	LIGHT DUTY	10818	7005-110-020

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DRAWN BY: EBC
DATE: 11-04-06
REVIEWED BY: CCA
DATE: 09-05-03

MATERIAL: 8 IN. & 10 IN. DRAIN BASIN DESIGN DETAILS

3130 VERONA AVE
BURLINGTON, MA 01803
PH: (781) 852-2440
FAX: (781) 852-2480
www.nyloplast-us.com

NYLOPLAST DRAIN BASIN WITH DOME GRATE

(1,2) INTEGRATED DUCTILE IRON GRATE TO MATCH BASIN O.D.
(3) VARIABLE INVERT HEIGHTS AVAILABLE (ACCORDING TO PLAN/STATE OFF)
(4) VARIOUS TYPES OF INLET & OUTLET ADAPTERS AVAILABLE:
4" - 12" FOR CORRUGATED HOPE (ADS N-12HANCOR DUAL WALL, ADSHANCOR SINGLE WALL), N-12 HP, PVC SEWER (EX: SDR 35), PVC DWV (EX: SCH 40), PVC C900/C905, CORRUGATED & RIBBED PVC
(5) ADAPTER ANGLES VARIABLE 0° - 30° ACCORDING TO PLANS
(6) VARIABLE SLUMP DEPTH ACCORDING TO PLANS (6" MIN. ON 0° - 24°, 10" MIN. ON 30° BASED ON MANUFACTURING REQ.)

MINIMUM PIPE BURIAL DEPTH PER PIPE MANUFACTURER RECOMMENDATION (MIN. MANUFACTURING REQ. SAME AS MIN. SLUMP)

THE BACKFILL MATERIAL SHALL BE CRUSHED STONE OR OTHER GRANULAR MATERIAL MEETING THE REQUIREMENTS OF CLASS 1 OR CLASS 2 MATERIAL AS DEFINED IN ASTM D2321. BEDDING & BACKFILL FOR SURFACE DRAINAGE INLETS SHALL BE PLACED & COMPACTED UNIFORMLY IN ACCORDANCE WITH ASTM D2321.

WATERTIGHT JOINT (CORRUGATED HOPE SHOWN)

1 - 8" - 30" DOME GRATES SHALL BE DUCTILE IRON PER ASTM A536 GRADE 70-50-05.
2 - 8" DOME GRATES FIT ON THE DRAIN BASIN WITH THE USE OF A PVC BODY TOP. SEE DRAWING NO. 7005-110-045.
3 - DRAIN BASIN TO BE CUSTOM MANUFACTURED ACCORDING TO PLAN DETAILS. RESINS ARE NEEDED FOR FINISH OVER BY DUE TO SHIPPING RESTRICTIONS. SEE DRAWING NO. 7005-110-005.
4 - DRAINAGE CONNECTION JOINT TIGHTNESS SHALL CONFORM TO ASTM D3212 FOR CORRUGATED HOPE (ADS N-12HANCOR DUAL WALL) & SDR 35 PVC.
5 - ADAPTERS CAN BE MOUNTED ON ANY ANGLE 0° TO 30°. TO DETERMINE MINIMUM ANGLE BETWEEN ADAPTERS SEE DRAWING NO. 7005-110-012.
6 - 8" - 30" DOME GRATES HAVE LOAD RATING.

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DRAWN BY: EBC
DATE: 03-25-06
REVIEWED BY: CCA
DATE: 09-05-03

MATERIAL: DRAIN BASIN WITH DOME GRATE QUICK SPEC INSTALLATION DETAIL

3130 VERONA AVE
BURLINGTON, MA 01803
PH: (781) 852-2440
FAX: (781) 852-2480
www.nyloplast-us.com

Section 2721 Engineered Surface Drainage Products

GENERAL
PVC surface drainage inlets shall include the drain basin type as indicated on the contract drawing and referenced within the contract specifications. The ductile iron grates for each of these fittings are to be considered an integral part of the surface drainage inlet and shall be furnished by the same manufacturer. The surface drainage inlets shall be as manufactured by Nyloplast a division of Advanced Drainage Systems, Inc., or prior approved equal.

MATERIALS
The drain basins required for this contract shall be manufactured from PVC pipe stock, utilizing a thermoforming process to reform the pipe stock to the specified configuration. The drainage pipe connection stubs shall be manufactured from PVC pipe stock and formed to provide a watertight connection with the specified pipe system. This joint tightness shall conform to ASTM D3212 for joints for drain and sewer plastic pipe using flexible elastomeric seals. The flexible elastomeric seals shall conform to ASTM F427. The pipe ball spigot shall be joined to the main body of the drain basin or catch basin. The raw material used to manufacture the pipe stock that is used to manufacture the main body and pipe stubs of the surface drainage inlets shall conform to ASTM D1784 cell class 12454.

The grates and frames furnished for all surface drainage inlets shall be ductile iron for sizes 8", 10", 12", 15", 18", 24" and 30" and shall be made specifically for each basin so as to provide a round bottom flange that closely matches the diameter of the surface drainage inlet. Grates for drain basins shall be capable of supporting various wheel loads as specified by Nyloplast. 12" and 15" square grates will be hinged to the frame using pins. Ductile iron used in the manufacture of the castings shall conform to ASTM A536 grade 70-50-05. Grates and covers shall be provided painted black.

INSTALLATION
The specified PVC surface drainage inlet shall be installed using conventional flexible pipe backfill materials and procedures. The backfill material shall be crushed stone or other granular material meeting the requirements of class 1 or class 2 material as defined in ASTM D2321. Bedding and backfill for surface drainage inlets shall be well placed and compacted uniformly in accordance with ASTM D2321. The drain basin body will be cut at the time of the final grade. No brick, stone or concrete block will be required to set the grate to the final grade height. For load rated installations, a concrete slab shall be poured under and around the grate and frame. The concrete slab must be designed taking into consideration local soil conditions, traffic loading, and other applicable design factors. For other installation considerations such as migration of fines, ground water, and soft foundations refer to ASTM D2321 guidelines.

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Section 2722 Engineered Surface Drainage Products

GENERAL
PVC surface drainage inlets shall be to be considered an integral part of the surface drainage inlet and shall be furnished by the same manufacturer. The surface drainage inlets shall be as manufactured by Nyloplast a division of Advanced Drainage Systems, Inc., or prior approved equal.

MATERIALS
The inline drain required for this contract shall be manufactured from PVC pipe stock, utilizing a thermo-molding process to reform the pipe stock to the furnished configuration. The drainage pipe connection stubs shall be manufactured from PVC pipe stock and formed to provide a watertight connection with the specified pipe system. This joint tightness shall conform to ASTM D3212 for joints for drain and sewer plastic pipe using flexible elastomeric seals. The flexible elastomeric seals shall conform to ASTM F427. The pipe ball spigot shall be joined to the inline drain body by use of a swage mechanical joint. The raw material used to manufacture the pipe stock that is used to manufacture the inline drain body and pipe stubs of the surface drainage inlets shall conform to ASTM D1784 cell class 12454.

The grates furnished for all surface drainage inlets shall be ductile iron grates for sizes 8", 10", 12", 15", 18", 24" and 30" shall be made specifically for each fitting so as to provide a round bottom flange that closely matches the diameter of the surface drainage inlet. Grates for inline drains shall be capable of supporting H-20 wheel loading for traffic areas or H-10 loading for pedestrian areas. 12" and 15" square grates will be hinged to the frame using pins. Metal used in the manufacture of the castings shall conform to ASTM A536 grade 70-50-05 for ductile iron. Grates shall be provided painted black.

INSTALLATION
The specified PVC surface drainage inlet shall be installed using conventional flexible pipe backfill materials and procedures. The backfill material shall be crushed stone or other granular material meeting the requirements of class 1 or class 2 material as defined in ASTM D2321. Bedding and backfill for surface drainage inlets shall be well placed and compacted uniformly in accordance with ASTM D2321. The drain basin body will be cut at the time of the final grade. No brick, stone or concrete block will be required to set the grate to the final grade height. For H-20 load rated installations, a concrete ring will be poured under and around the grate and frame. The concrete slab must be designed taking into consideration local soil conditions, traffic loading, and other applicable design factors. For other installation considerations such as migration of fines, ground water, and soft foundations refer to ASTM D2321 guidelines.

WHEN ARE INLINE DRAINS USED?

- 1: TO ENTER AN EXISTING LINE USING A TEE
- 2: AT THE BEGINNING OF A DRAIN LINE USING AN ELBOW & RISER

TYPICAL INSTALLATIONS

TYPICAL INSTALLATION OF NYLOPLAST DRAIN BASIN AND INLINE DRAIN

WHEN ARE DRAIN BASINS USED?

- 1: TO CHANGE ELEVATION
- 2: TO CHANGE PIPE DIAMETER
- 3: TO CHANGE PIPE TYPE
- 4: FOR SHALLOW APPLICATIONS
- 5: TO CHANGE DIRECTION

1 - STRUCTURES & ADAPTERS AVAILABLE IN SIZES 8" - 30"
2 - ADAPTERS CAN BE MOUNTED ON ANY ANGLE 0° TO 30°. TO DETERMINE MINIMUM ANGLE BETWEEN ADAPTERS SEE DRAWING NO. 7005-110-012
3 - DRAIN BASIN TO BE CUSTOM MANUFACTURED ACCORDING TO PLAN DETAILS. RESINS ARE NEEDED FOR FINISH OVER BY DUE TO SHIPPING RESTRICTIONS. SEE DRAWING NO. 7005-110-005

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DRAWN BY: AWA
DATE: 04-18-06
REVIEWED BY: EBC
DATE: 5-05-06

MATERIAL: 8 IN. - 30 IN. TYPICAL INSTALLATION OPTIONS

3130 VERONA AVE
BURLINGTON, MA 01803
PH: (781) 852-2440
FAX: (781) 852-2480
www.nyloplast-us.com

Section 2722 Engineered Surface Drainage Products

GENERAL
PVC surface drainage inlets shall be to be considered an integral part of the surface drainage inlet and shall be furnished by the same manufacturer. The surface drainage inlets shall be as manufactured by Nyloplast a division of Advanced Drainage Systems, Inc., or prior approved equal.

MATERIALS
The inline drain required for this contract shall be manufactured from PVC pipe stock, utilizing a thermo-molding process to reform the pipe stock to the furnished configuration. The drainage pipe connection stubs shall be manufactured from PVC pipe stock and formed to provide a watertight connection with the specified pipe system. This joint tightness shall conform to ASTM D3212 for joints for drain and sewer plastic pipe using flexible elastomeric seals. The flexible elastomeric seals shall conform to ASTM F427. The pipe ball spigot shall be joined to the inline drain body by use of a swage mechanical joint. The raw material used to manufacture the pipe stock that is used to manufacture the inline drain body and pipe stubs of the surface drainage inlets shall conform to ASTM D1784 cell class 12454.

The grates furnished for all surface drainage inlets shall be ductile iron grates for sizes 8", 10", 12", 15", 18", 24" and 30" shall be made specifically for each fitting so as to provide a round bottom flange that closely matches the diameter of the surface drainage inlet. Grates for inline drains shall be capable of supporting H-20 wheel loading for traffic areas or H-10 loading for pedestrian areas. 12" and 15" square grates will be hinged to the frame using pins. Metal used in the manufacture of the castings shall conform to ASTM A536 grade 70-50-05 for ductile iron. Grates shall be provided painted black.

INSTALLATION
The specified PVC surface drainage inlet shall be installed using conventional flexible pipe backfill materials and procedures. The backfill material shall be crushed stone or other granular material meeting the requirements of class 1 or class 2 material as defined in ASTM D2321. Bedding and backfill for surface drainage inlets shall be well placed and compacted uniformly in accordance with ASTM D2321. The drain basin body will be cut at the time of the final grade. No brick, stone or concrete block will be required to set the grate to the final grade height. For H-20 load rated installations, a concrete ring will be poured under and around the grate and frame. The concrete slab must be designed taking into consideration local soil conditions, traffic loading, and other applicable design factors. For other installation considerations such as migration of fines, ground water, and soft foundations refer to ASTM D2321 guidelines.

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NOTE:
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DESIGNED BY: _____	RC	<p>Greater New Haven Water Pollution Control Authority 260 East Street New Haven, CT 06511 (203) 466-5200 p (203) 772-1564 f www.gnhwpc.com</p>	PROJECT NO. _____	SSF 2015-06
DRAWN BY: _____	RC		FILE NAME: _____	NYLOPLAST1
SHEET CHK'D BY: _____	TYS		SHEET NO. _____	9 OF 10
CROSS CHK'D BY: _____	TYS		SCALE: _____	N.T.S.
APPROVED BY: _____	TYS		DATE: _____	09/14/2015
REV. NO.	DATE	DRWN	CHKD	REMARKS

Section 2724

Engineered Surface Drainage Products

GENERAL

PVC surface drainage inlets shall be of the road and highway structure type as indicated on the contract drawings and referenced within the contract specifications. The ductile iron frame and grate for each of these structures is to be considered an integral part of the surface drainage inlet and shall be furnished by the same manufacturer. The road and highway structure shall be as manufactured by Nyloplast a division of Advanced Drainage Systems, Inc. or prior approved equal.

MATERIALS

The road and highway structure required for this contract shall be manufactured from PVC pipe stock, utilizing a thermo-molding process to reform the pipe stock to the specified configuration. The drainage pipe connection stubs shall be manufactured from PVC pipe stock and formed to provide a watertight connection with the specified pipe system. This joint tightness shall conform to ASTM D3212 for joints for drain and sewer plastic pipe using flexible elastomeric seals. The flexible elastomeric seals shall conform to ASTM F477. The pipe bell spigot shall be joined to the main body of the structure. The raw material used to manufacture the pipe stock that is used to manufacture the main body and pipe stubs of the surface drainage inlets shall conform to ASTM D1784 cell class 12454.

The grate and frame for all road and highway structures shall be ductile iron and shall be made specifically for each so as to provide a round bottom flange that closely matches the diameter of the PVC basin body. The grate and frame shall be capable of supporting H-20 wheel loading for traffic areas. The metal used in the manufacture of the castings shall conform to ASTM A536 grade 70-50-05 for ductile iron.

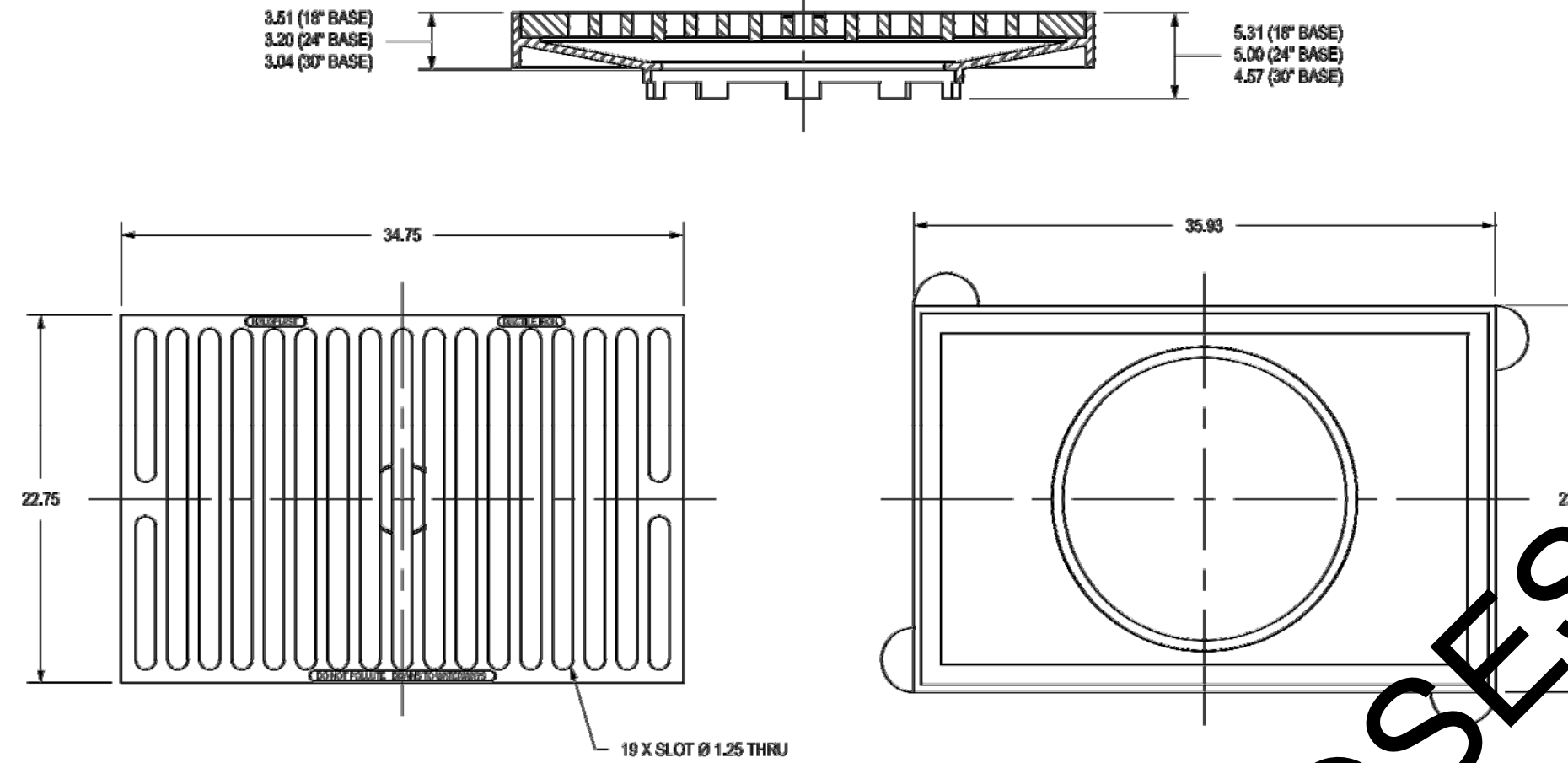
INSTALLATION

The specified PVC road and highway structure shall be installed using conventional flexible pipe backfill materials and procedures. The backfill material shall be crushed stone or other granular material meeting the requirements of class 1 or 2 material as defined in ASTM D2321. Bedding and backfill for the road and highway structure shall be placed and compacted uniformly in accordance with ASTM D2321. The road and highway structure body will be cut at the time of the final grade. No brick, stone or concrete block will be required to set the grate to the final grade height. For H-20 load rated installations, a concrete ring will be poured under and around the grate and frame. The concrete slab must be designed taking into consideration local soil conditions, traffic loading, and other applicable design factors. For other installation considerations such as migration of fines, ground water, and soft foundations refer to ASTM D2321 guidelines.

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DATE: 11-14-13	PROJECT NO. NAME:	TITLE:	3130 VERONA AVE BUPORD, GA 30618 PHN (770) 933-2440 FAX (770) 933-2489 www.nyloplast-us.com
APPROVED BY: JIC	DATE: 11-14-13	DWG NO.:	3130 VERONA AVE BUPORD, GA 30618 PHN (770) 933-2440 FAX (770) 933-2489 www.nyloplast-us.com
DWG SIZE: A	SCALE: 1:1	SHEET: 1 OF 1	3130 VERONA AVE BUPORD, GA 30618 PHN (770) 933-2440 FAX (770) 933-2489 www.nyloplast-us.com

3299CGR

APPROX. DRAIN AREA = 632.26 SQ FT
APPROX. WEIGHT OF GRATE = 84.00 LBS



DIMENSIONS ARE FOR REFERENCE ONLY
ACTUAL DIMENSIONS MAY VARY

DIMENSIONS ARE IN INCHES

GRATE MEETS H-20 LOAD RATING

QUALITY: MATERIALS SHALL CONFORM TO ASTM A536 GRADE 70-50-05

PAINT: CASTINGS ARE FINISHED WITH A BLACK PAINT

LOCKING DEVICE AVAILABLE UPON REQUEST SEE DRAWING NO. 7001-110-105

*WEIGHT DOES NOT INCLUDE FRAME

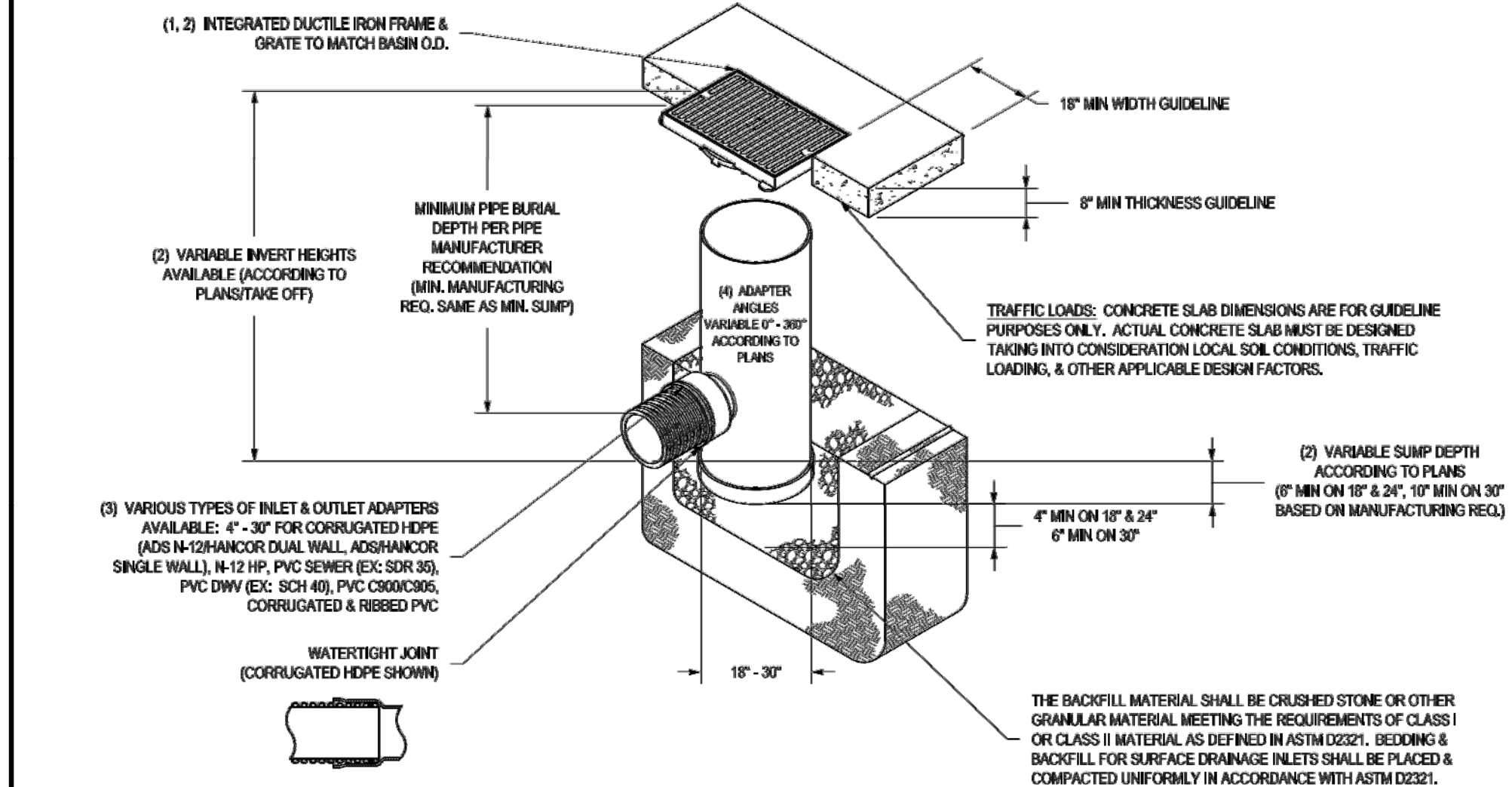
FRAME WITH 1/8\"/>

FRAME WITH 2\"/>

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DATE: 03-20-10	PROJECT NO. NAME:	TITLE:	3130 VERONA AVE BUPORD, GA 30618 PHN (770) 933-2440 FAX (770) 933-2489 www.nyloplast-us.com
REVISOR BY: CCA	DATE: 09-13-13	DWG NO.:	3130 VERONA AVE BUPORD, GA 30618 PHN (770) 933-2440 FAX (770) 933-2489 www.nyloplast-us.com
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NYLOPLAST 2 FT X 3 FT ROAD & HIGHWAY STRUCTURE: 32 __ AGR __ X

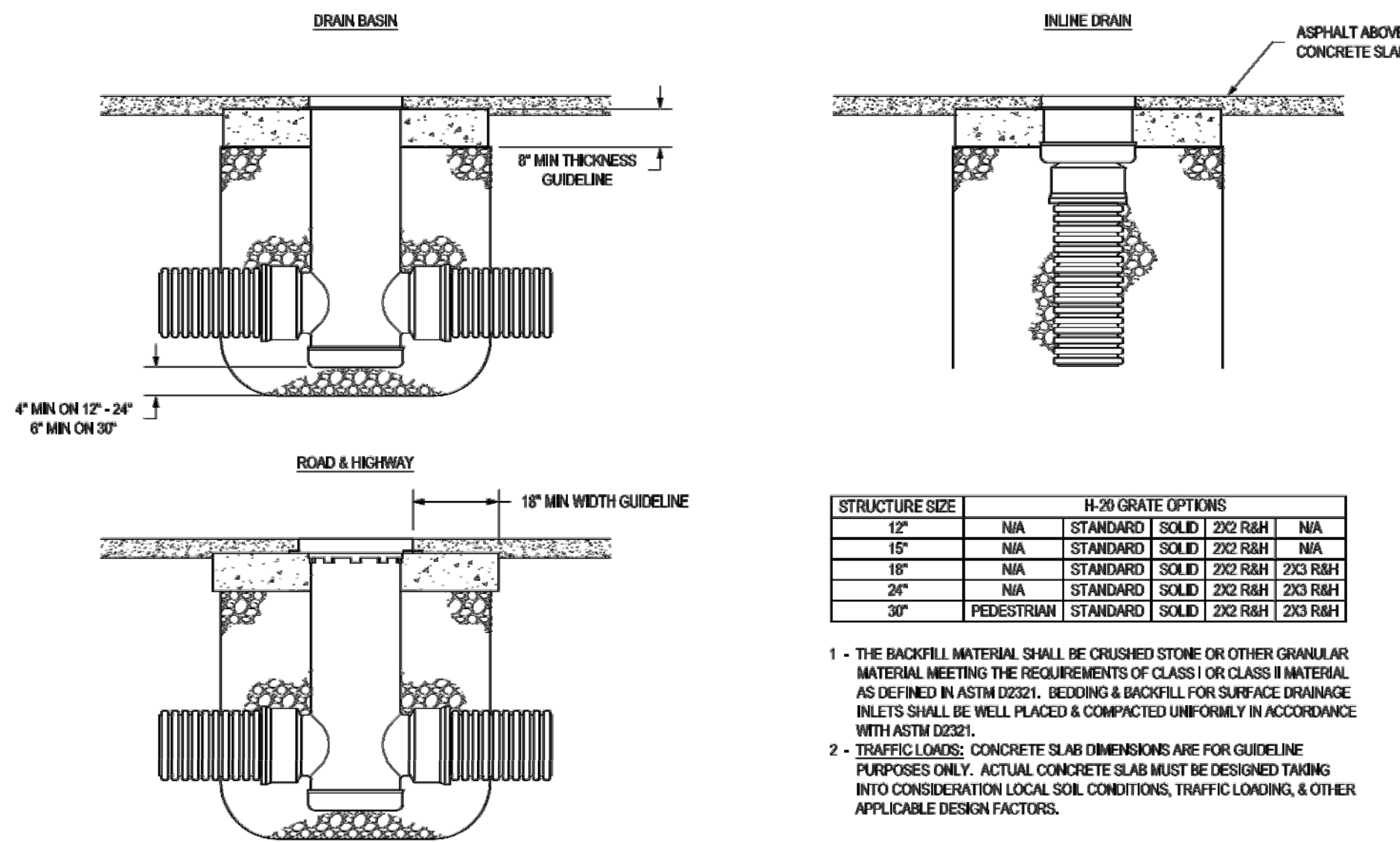


- 1 - 18\"/>
- 2 - DRAIN BASIN TO BE CUSTOM MANUFACTURED ACCORDING TO PLAN DETAILS.
- 3 - DRAINAGE CONNECTION STUB JOINT TIGHTNESS SHALL CONFORM TO ASTM D3212 FOR CORRUGATED HDPE (AD5 N-12) HANCOCK DUAL WALL, AD5 HANCOCK SINGLE WALL, H-12 HP, PVC SEWER (EJC SDR 35), PVC DWV (EJC SDR 41), PVC CORRUGATED, CORRUGATED & REBSED PVC.
- 4 - ADAPTERS CAN BE MOUNTED ON ANY ANGLE UP TO 30°, TO DETERMINE MINIMUM ANGLE BETWEEN ADAPTERS SEE DRAWING NO. 7001-110-012.
- 5 - ROAD & HIGHWAY GRATE SHALL MEET H-20 LOAD RATING.

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APPROVED BY: CCA	DATE: 09-13-13	DWG NO.:
DWG SIZE: A	SCALE: 1:48	SHEET: 1 OF 1

ASPHALT INSTALLATION



STRUCTURE SIZE	N/A	STANDARD	SOLID	Z32 R&H	N/A
12"	N/A	STANDARD	SOLID	Z32 R&H	N/A
15"	N/A	STANDARD	SOLID	Z32 R&H	N/A
18"	N/A	STANDARD	SOLID	Z32 R&H	Z30 R&H
24"	N/A	STANDARD	SOLID	Z32 R&H	Z30 R&H
30"	PEDESTRIAN	STANDARD	SOLID	Z32 R&H	Z30 R&H

- 1 - THE BACKFILL MATERIAL SHALL BE CRUSHED STONE OR OTHER GRANULAR MATERIAL MEETING THE REQUIREMENTS OF CLASS 1 OR CLASS 2 MATERIAL AS DEFINED IN ASTM D2321. BEDDING & BACKFILL FOR SURFACE DRAINAGE INLETS SHALL BE WELL PLACED & COMPACTED UNIFORMLY IN ACCORDANCE WITH ASTM D2321.
- 2 - TRAFFIC LOADS: CONCRETE SLAB DIMENSIONS ARE FOR GUIDELINE PURPOSES ONLY. ACTUAL CONCRETE SLAB MUST BE DESIGNED TAKING INTO CONSIDERATION LOCAL SOIL CONDITIONS, TRAFFIC LOADING, & OTHER APPLICABLE DESIGN FACTORS.

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DATE: 4-4-10	PROJECT NO. NAME:	TITLE:	3130 VERONA AVE BUPORD, GA 30618 PHN (770) 933-2440 FAX (770) 933-2489 www.nyloplast-us.com
REVISOR BY: CCA	DATE: 13-28-11	DWG NO.:	3130 VERONA AVE BUPORD, GA 30618 PHN (770) 933-2440 FAX (770) 933-2489 www.nyloplast-us.com
DWG SIZE: A	SCALE: 1:24	SHEET: 1 OF 1	3130 VERONA AVE BUPORD, GA 30618 PHN (770) 933-2440 FAX (770) 933-2489 www.nyloplast-us.com

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DESIGNED BY: RC	PROJECT NO.:	SSP 2015-06
DRAWN BY: RC	FILE NAME:	NYLOPLAST2
SHEET CHK'D BY: TYS	SHEET NO.:	10 OF 10
CROSS CHK'D BY: TYS	SCALE:	N.T.S.
APPROVED BY: TYS		
DATE: 09/14/2015		



Greater New Haven Water Pollution Control Authority
260 East Street
New Haven, CT 06511
(203) 466-5280 p. (203) 772-1564 f.
www.gnhwpc.com

GREATER NEW HAVEN WATER POLLUTION CONTROL AUTHORITY
260 EAST STREET
PARKING LOT IMPROVEMENTS

NYLOPLAST
DRAINAGE DETAILS (2)

PROJECT NO.:	SSP 2015-06
FILE NAME:	NYLOPLAST2
SHEET NO.:	10 OF 10
SCALE:	N.T.S.