

Enclosure F  
Design Drawings

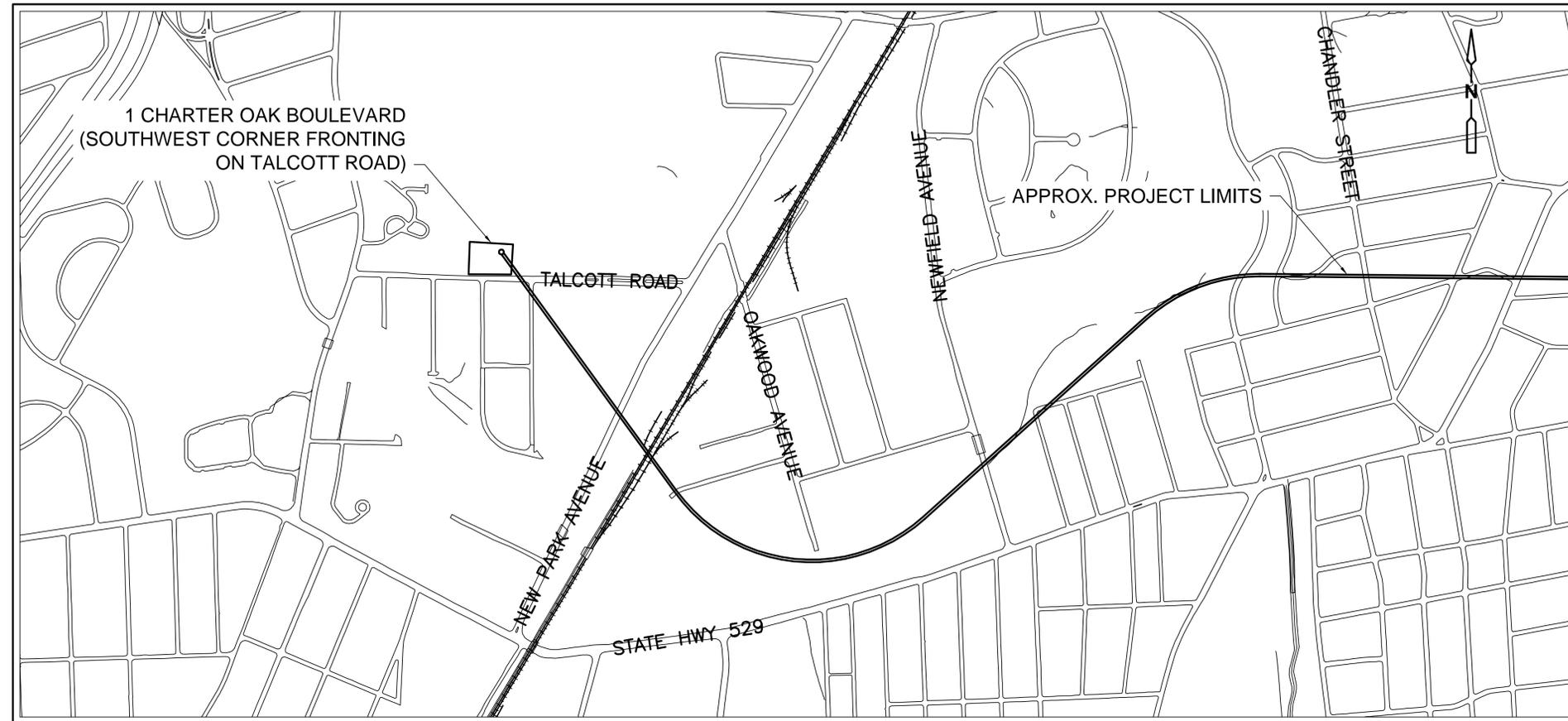


**THE METROPOLITAN DISTRICT  
HARTFORD, CONNECTICUT**

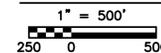
**SPECIAL DEVELOPMENT DISTRICT AND ZONE  
CHANGE REQUEST FOR SOUTH TUNNEL ACCESS  
SHAFT AT 1 CHARTER OAK BOULEVARD IN  
TOWN OF WEST HARTFORD**

**JULY 2015**

**CITY OF HARTFORD AND TOWN OF WEST HARTFORD, CT**



**LOCUS MAP**



**SHEET NO. TITLE**

- 210 C-101 RETRIEVAL SHAFT SITE 2D LANDSCAPING
- 220 C-101 RETRIEVAL SHAFT SITE RENDERING

**CIVIL**

- 200 C-001 LEGEND
- 230 C-100 PROPOSED ZONING MAP
- 230 C-101 RETRIEVAL SHAFT SITE AND INTEGRAL DROP SHAFT PLAN AND PROFILE
- 230 C-102 RETRIEVAL SHAFT SITE AND UTILITY LAYOUT PLAN
- 230 C-103 RETRIEVAL SHAFT GRADING AND DRAINAGE PLAN
- 230 C-104 RETRIEVAL SHAFT ENTRANCE ROAD PLAN & PROFILE
- 230 C-105 RETRIEVAL SHAFT UTILITY PROFILES
- 230 C-106 RETRIEVAL SHAFT SITE PARKING, PHOTOMETRIC & LOADING AREA PLAN
- 230 C-107 INTERSECTION SIGHT DISTANCES AT TALCOTT ROAD
- 230 C-111 SITE PREP-DEMO-STAGING AT RETRIEVAL SHAFT
- 230 C-121 TEMPORARY EROSION CONTROL & STORMWATER MGMT DURING CONSTRUCTION
- 230 C-131 RETRIEVAL SHAFT & TALCOTT ROAD RESTORATION PLAN
- 230 C-144 RETRIEVAL SHAFT FINAL SITE - PLANTING PLAN
- 240 C-101 WEST HARTFORD CONSOLIDATION CONDUIT PLAN AND PROFILE
- 240 C-111 CTS-3 - STAGING, TEMPORARY SEDIMENTATION & EROSION CONTROL PLAN
- 299 C-101 CIVIL DETAIL SHEET I
- 299 C-103 CIVIL DETAIL SHEET III
- 299 C-104 CIVIL DETAIL SHEET IV
- 299 C-111 LANDSCAPING DETAILS 1
- 299 C-112 PLANTING LIST AND PLANTING NOTES
- 299 C-113 STONE PILLARS

**MDC STANDARD DETAILS**

**ARCHITECTURAL**

- 216 A-101 RETRIEVAL SHAFT ODOR CONTROL ENCLOSURE - PLAN
- 216 A-201 RETRIEVAL SHAFT ODOR CONTROL ENCLOSURE - ELEVATIONS
- 216 A-301 RETRIEVAL SHAFT ODOR CONTROL ENCLOSURE - WALL SECTIONS
- 299 A-501 GENERAL SCHEDULES AND DETAILS

**MECHANICAL PROCESS**

- 231 D-101 RETRIEVAL SHAFT ODOR CONTROL PLAN
- 231 D-102 RETRIEVAL SHAFT PLUMBING PLAN, DETAILS AND SCHEDULES
- 231 D-301 RETRIEVAL SHAFT SECTION AND DETAILS
- 240 D-101 WEST HARTFORD INLET CONTROL GATE CHAMBER
- 299 D-101 TRASH RACK DETAIL

**STRUCTURAL**

- 203 S-101 RETRIEVAL SHAFT PLANS
- 203 S-301 RETRIEVAL SHAFT SECTION

**ELECTRICAL**

- 230 E-104 RETRIEVAL SHAFT AND WEST HARTFORD CONDUIT - SYSTEMS PLAN
- 230 E-601 MISCELLANEOUS SCHEDULES



500 ENTERPRISE DRIVE, SUITE 1A  
ROCKY HILL, CT 06067  
(860) 263-5800

in association with



90% SUBMITTAL - NOT FOR CONSTRUCTION

CONTRACT NO. 20

**LEGEND**

**EXISTING**

-  TREE LINE
-  PIPE SIZE AND FLOW ARROW
-  EDGE OF RIVER
-  100 YEAR FLOOD
-  500 YEAR FLOOD
-  GUY ANCHOR
-  METAL STREET LIGHT
-  TRANSFORMER
-  HYDRANT
-  MONITORING WELL
-  BORING
-  SIGN
-  GW
-  DECIDUOUS TREE
-  EVERGREEN TREE
-  SHRUB
-  ELECTRIC BOX
-  AIR CONDITIONER

**NOTE:**  
SEE APPLICABLE EXISTING CONDITIONS SHEETS FOR ADDITIONAL EXISTING FEATURE LEGEND INFORMATION

**PROPOSED**

-  PIPING 18" AND SMALLER
-  PIPING GREATER THAN 18"
-  CENTERLINE WITH STATIONING & TICK MARK
-  PERMANENT EASEMENT
-  TEMPORARY EASEMENT
-  WORK ZONE
-  DEMOLISH
-  LIMIT OF PAVEMENT OVERLAY
-  SANITARY MANHOLE
-  STORM DRAIN MANHOLE
-  CATCH BASIN
-  PLUG
-  FLOW ARROW
-  AIR RELEASE VALVE
-  BLOW-OFF
-  GATE VALVE
-  REDUCER
-  TEE
-  SLUICE GATE
-  FIRE HYDRANT
-  TEST PIT
-  BOLLARD
-  SURFACE ELEVATION
-  SURFACE CONTOUR
-  CONSTRUCTION FENCE
-  CHAIN-LINK FENCE
-  DECORATIVE FENCE
-  SILT FENCE
-  CATCH BASIN SILTATION CONTROLS
-  ANTI TRACKING PAD
-  WATER LINE
-  TRAFFIC BARRIERS
-  TREE OR BUSH TO BE REMOVED
-  HAYBALES
-  CRUSHED STONE FOR STAGING AREA
-  LIMITS OF WORK (TRADE, CONTRACT, ETC.)

VERTICAL DATUM IS NGVD 29  
HORIZONTAL DATUM IS NAD 83/92

REV. NO.	DATE	DRWN	CHKD	REMARKS

FILE NAME: 200\_C-001  
DESIGNED BY: B. CANTERBURY  
DRAWN BY: M. THIBODEAU  
CHK'D BY: R. BERLANDY  
X-CHK'D BY: J. SULLIVAN  
APPROVED BY: J. SULLIVAN  
DATE: MAY 2015

**AECOM** 500 ENTERPRISE DRIVE, SUITE 1A  
ROCKY HILL, CT 06067  
PHONE (860) 263-5800

in association with  
**BLACK & VEATCH**

CONTRACT NO. 2015B-27  
SOUTH HARTFORD CONVEYANCE AND  
STORAGE TUNNEL

CONTRACT 2  
**LEGEND**  
CIVIL

PLAN NUMBER

SHEET NO.

**200 C-001**



VERTICAL DATUM IS NGVD 29  
HORIZONTAL DATUM IS NAD 83/92

**MDC**  
The Metropolitan District  
555 Main Street  
Hartford, Connecticut

REV. NO.	DATE	DRWN	CHKD	REMARKS

FILE NAME: \_\_\_\_\_  
DESIGNED BY: \_\_\_\_\_  
DRAWN BY: \_\_\_\_\_  
CHK'D BY: \_\_\_\_\_  
X-CHK'D BY: \_\_\_\_\_  
APPROVED BY: J. SULLIVAN  
DATE: MAY 2015

**AECOM** 500 ENTERPRISE DRIVE, SUITE 1A  
ROCKY HILL, CT 06067  
PHONE (860) 263-5800

in association with  
**BLACK & VEATCH**

CONTRACT NO. 2015B-27  
SOUTH HARTFORD CONVEYANCE AND  
STORAGE TUNNEL

RETRIEVAL SHAFT SITE  
2D LANDSCAPING  
CIVIL

PLAN NUMBER  
SHEET NO.  
210 C-101



VERTICAL DATUM IS NGVD 29  
 HORIZONTAL DATUM IS NAD 83/92



The Metropolitan District  
 555 Main Street  
 Hartford, Connecticut

REV. NO.	DATE	DRWN	CHKD	REMARKS

FILE NAME: \_\_\_\_\_  
 DESIGNED BY: \_\_\_\_\_  
 DRAWN BY: \_\_\_\_\_  
 CHK'D BY: \_\_\_\_\_  
 X-CHK'D BY: \_\_\_\_\_  
 APPROVED BY: J. SULLIVAN  
 DATE: MAY 2015



500 ENTERPRISE DRIVE, SUITE 1A  
 ROCKY HILL, CT 06067  
 PHONE (860) 263-5800

in association with  
**BLACK & VEATCH**

CONTRACT NO. 2015B-27  
 SOUTH HARTFORD CONVEYANCE AND  
 STORAGE TUNNEL

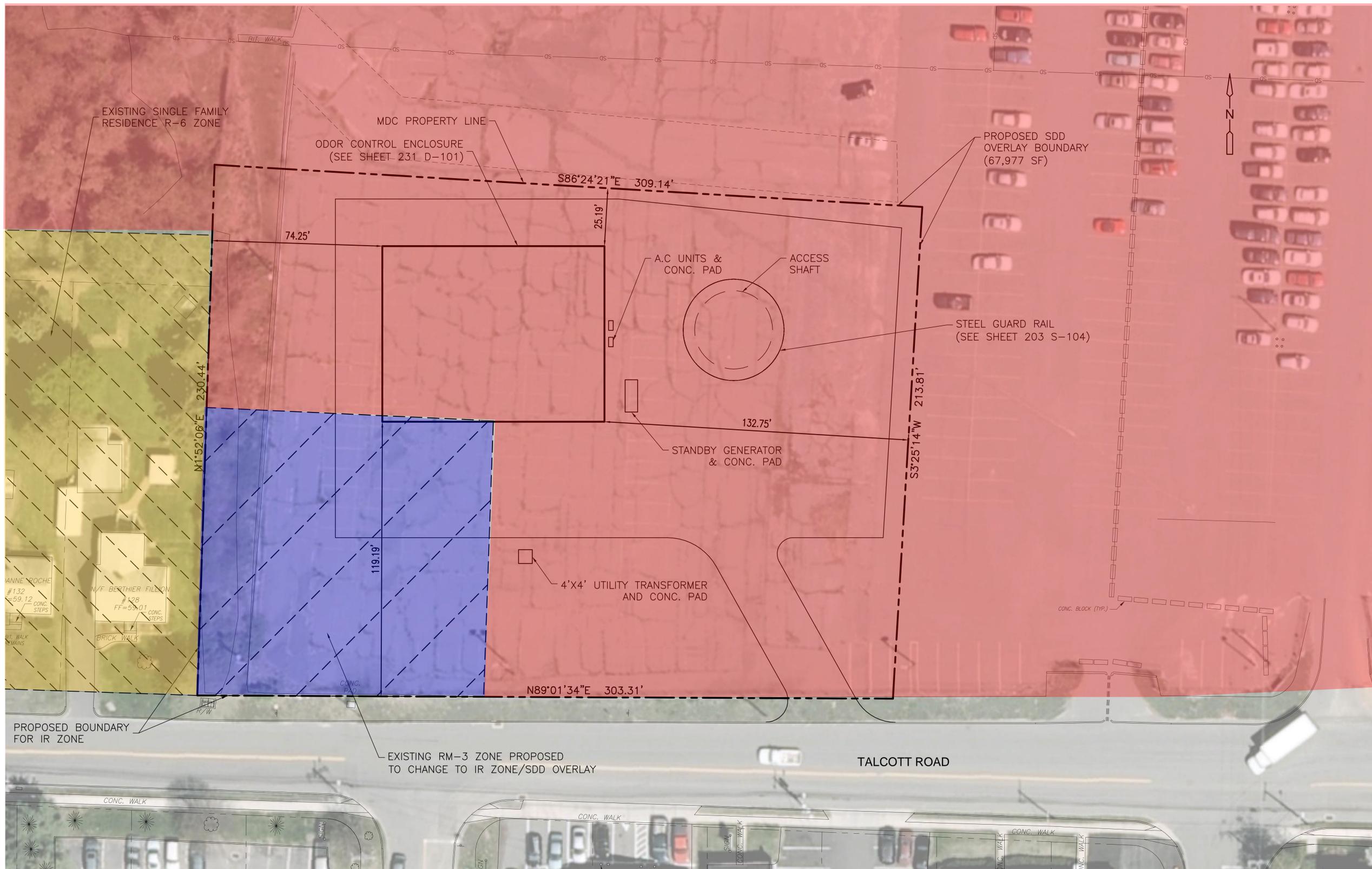
RETRIEVAL SHAFT SITE RENDERING

CIVIL

PLAN NUMBER

SHEET NO.

220 C-101



**PLAN**

SCALE: 1"=20'



SCALE: 1" = 20'

**NOTES:**

1. FOR LEGEND SEE SHEET 200 C-001.
2. FOR GENERAL NOTES AND ABBREVIATIONS SEE SHEET 200 C-002.
3. FOR LANDSCAPING DETAILS SEE SHEET 230 C-141
4. FOR ELECTRICAL SITE PLAN SEE SHEET 230 E-101

VERTICAL DATUM IS NGVD 29  
HORIZONTAL DATUM IS NAD 83/92



**The Metropolitan District**  
555 Main Street  
Hartford, Connecticut

REV. NO.	DATE	DRWN	CHKD	REMARKS

FILE NAME: ZONING MAP  
DESIGNED BY: S.GANESH  
DRAWN BY: M.THIBODEAU  
CHK'D BY: R.BERLANDY  
X-CHK'D BY: J.SULLIVAN  
APPROVED BY: J. SULLIVAN  
DATE: MAY 2015



500 ENTERPRISE DRIVE, SUITE 1A  
ROCKY HILL, CT 06067  
PHONE (860) 263-5800



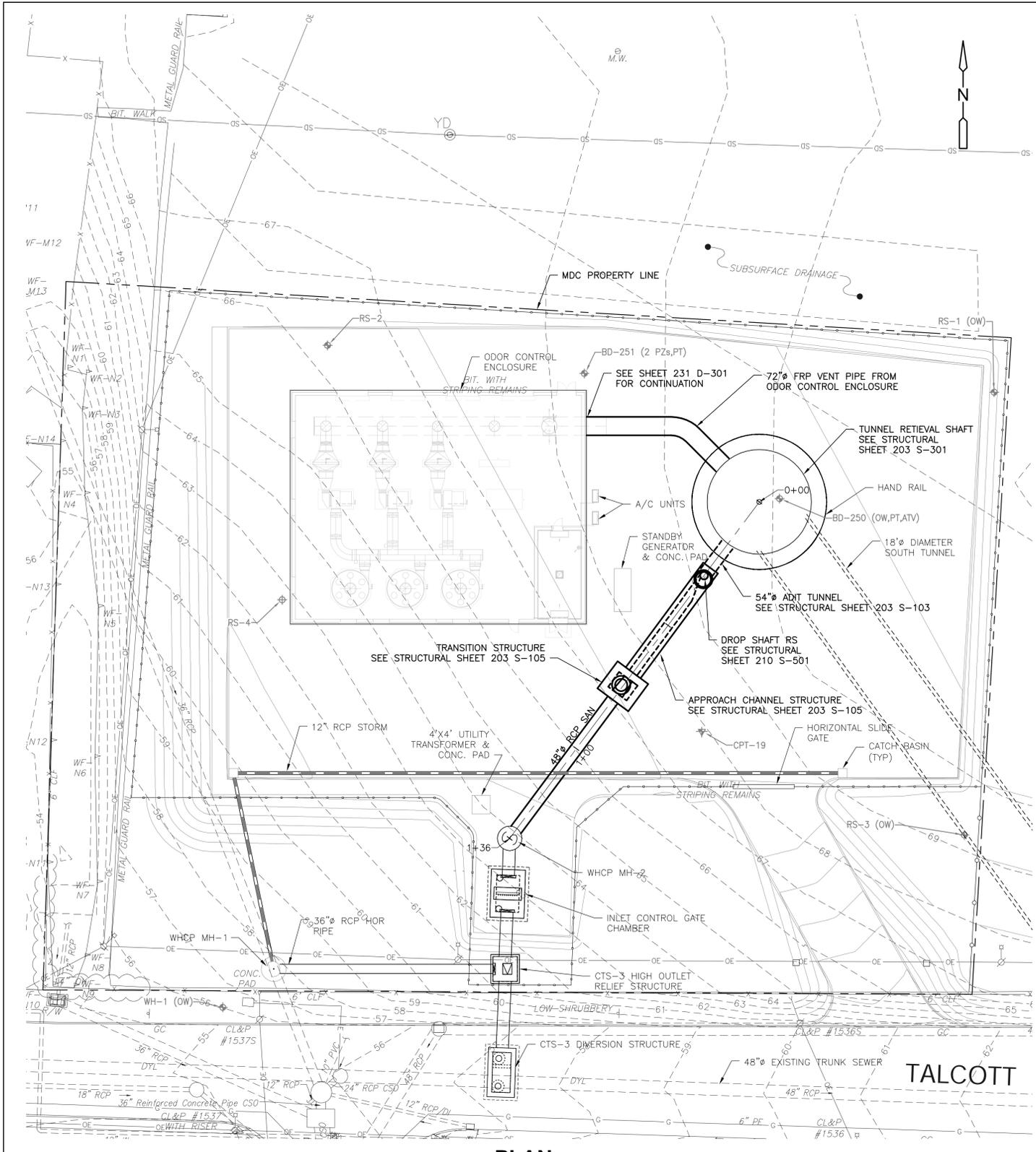
CONTRACT NO. 2015B-27  
SOUTH HARTFORD CONVEYANCE AND  
STORAGE TUNNEL

CONTRACT 2  
**PROPOSED  
ZONING MAP**  
CIVIL

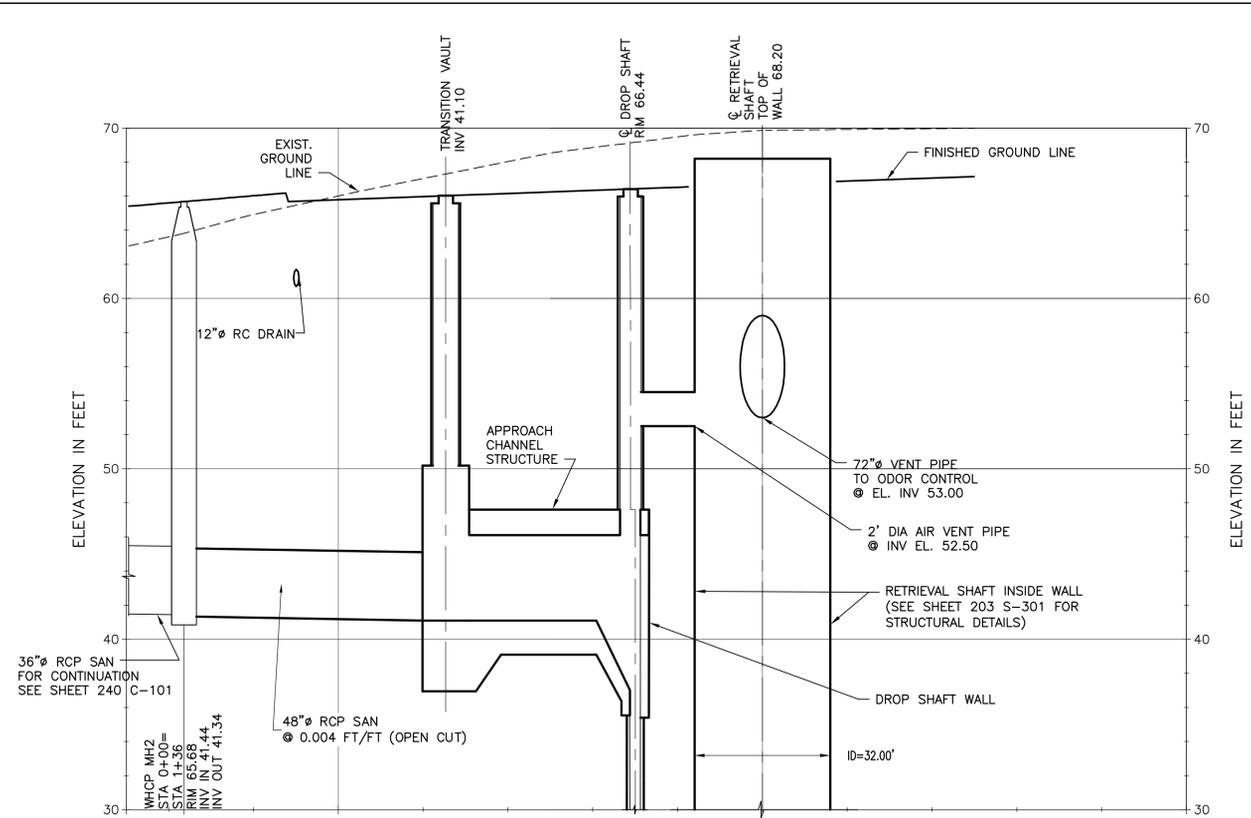
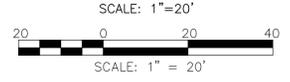
PLAN NUMBER

SHEET NO.

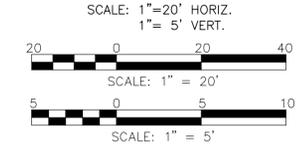
**230 C-100**



**PLAN**



**PROFILE**



**NOTES:**

1. FOR LEGEND SEE SHEET 200 C-001.
2. FOR GENERAL NOTES AND ABBREVIATIONS SEE SHEET 200 C-002.

VERTICAL DATUM IS NGVD 29  
HORIZONTAL DATUM IS NAD 83/92

**MDC**  
The Metropolitan District  
555 Main Street  
Hartford, Connecticut

REV. NO.	DATE	DRWN	CHKD	REMARKS

FILE NAME: 230\_C-101  
DESIGNED BY: S.GANESH  
DRAWN BY: M.THIRUDEAU  
CHK'D BY: R.BERLANDY  
X-CHK'D BY: J.SULLIVAN  
APPROVED BY: J.SULLIVAN  
DATE: MAY 2015

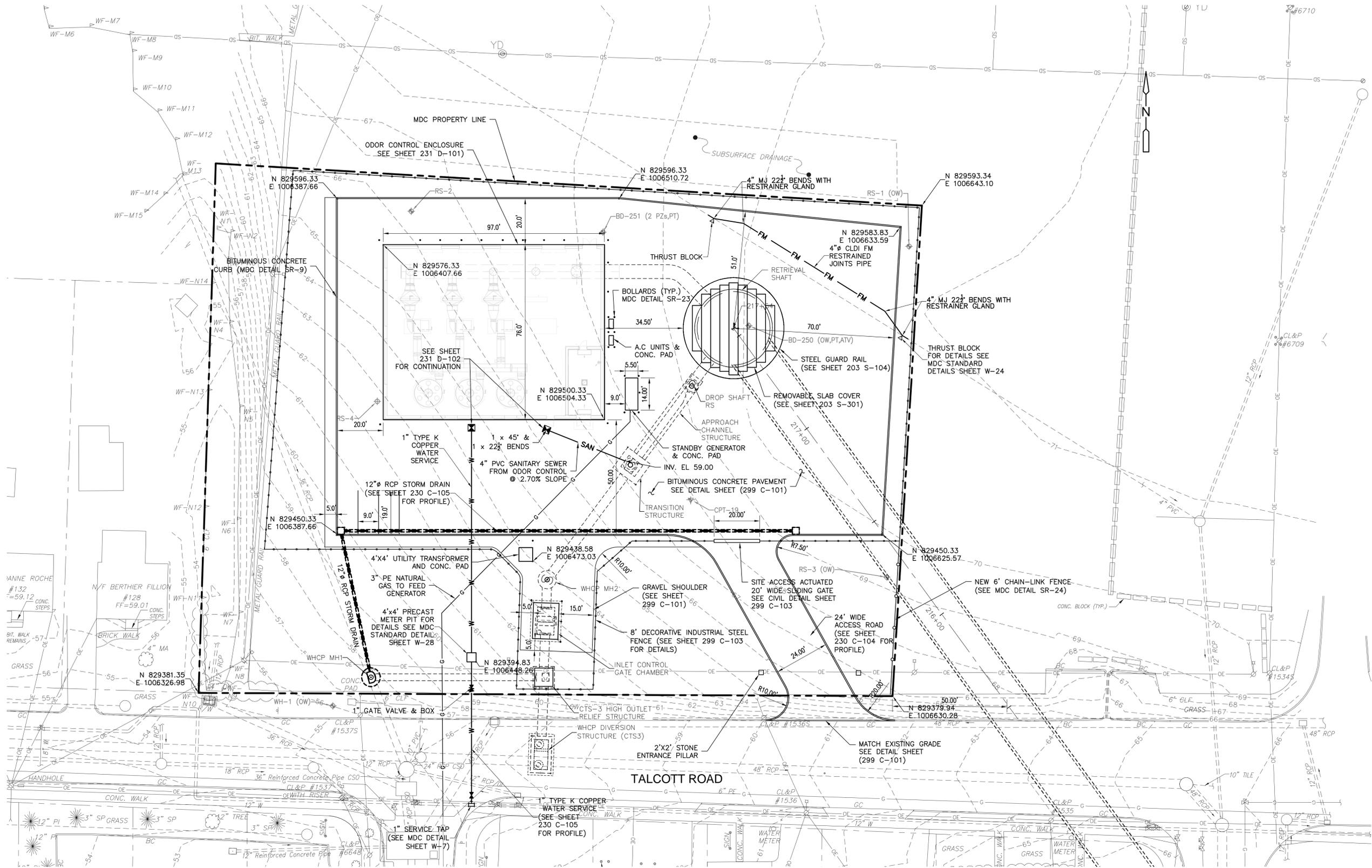
**AECOM** 500 ENTERPRISE DRIVE, SUITE 1A  
ROCKY HILL, CT 06067  
PHONE (860) 263-5800

in association with  
**BLACK & VEATCH**

CONTRACT NO. 2015B-27  
SOUTH HARTFORD CONVEYANCE AND  
STORAGE TUNNEL

CONTRACT 2  
**RETRIEVAL SHAFT AND INTEGRAL DROP SHAFT  
PLAN AND PROFILE**  
CIVIL

PLAN NUMBER  
SHEET NO.  
**230 C-101**



**PLAN**

SCALE: 1"=20'



**NOTES:**

1. FOR LEGEND SEE SHEET 200 C-001.
2. FOR GENERAL NOTES AND ABBREVIATIONS SEE SHEET 200 C-002.
3. FOR LANDSCAPING DETAILS SEE SHEET 230 C-141
4. FOR ELECTRICAL SITE PLAN SEE SHEET 230 E-101

VERTICAL DATUM IS NGVD 29  
HORIZONTAL DATUM IS NAD 83/92

**MDC**  
The Metropolitan District  
555 Main Street  
Hartford, Connecticut

REV. NO.	DATE	DRWN	CHKD	REMARKS
1	7/16/15	SG	JS	REVISED DRIVEWAY WIDTH AND FENCE LINE PER TOWN REVIEW COMMENT

FILE NAME:	230 C-102
DESIGNED BY:	S.GANESH
DRAWN BY:	M.THIBODEAU
CHK'D BY:	R.BERLANDY
X-CHK'D BY:	J.SULLIVAN
APPROVED BY:	J. SULLIVAN
DATE:	MAY 2015

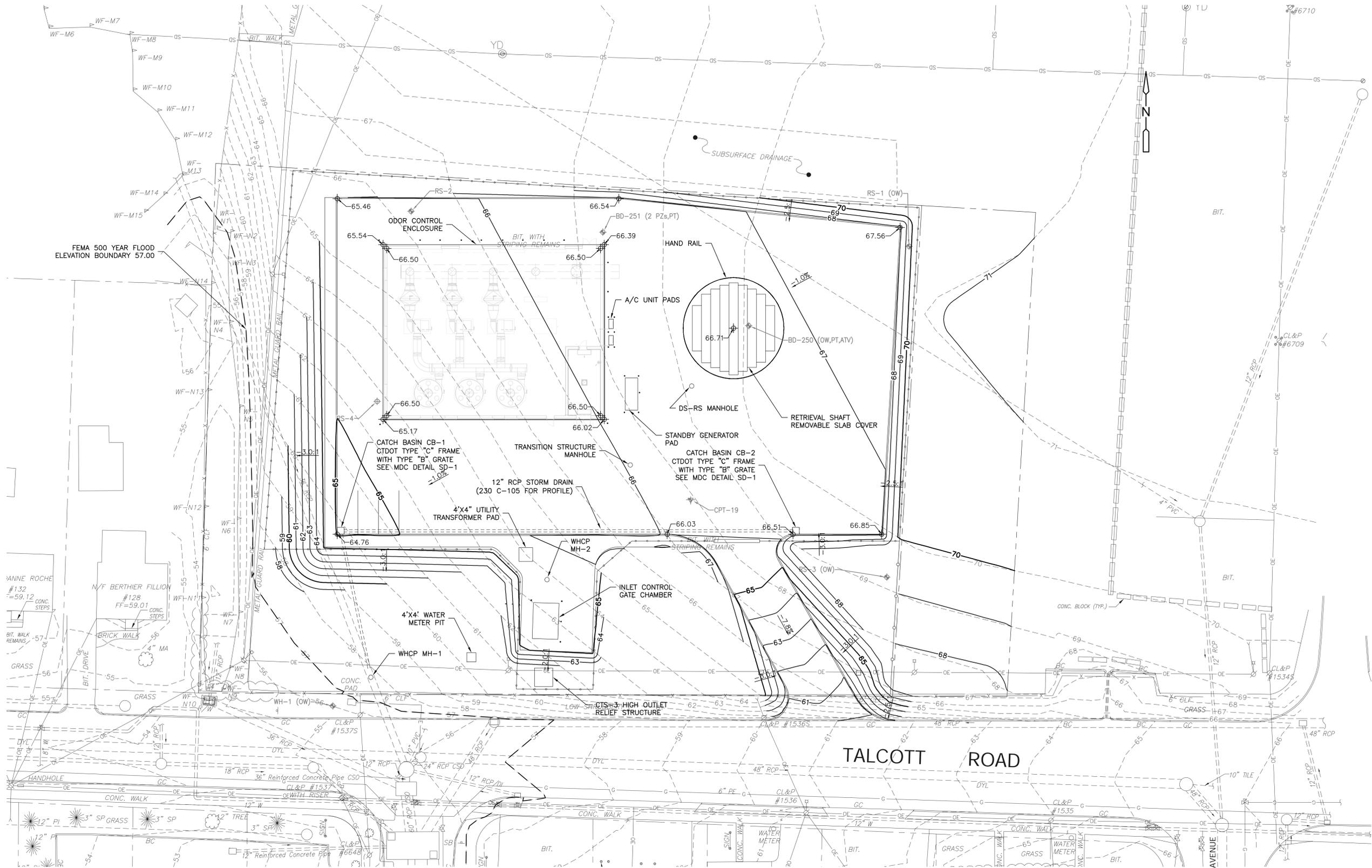
**AECOM** 500 ENTERPRISE DRIVE, SUITE 1A  
ROCKY HILL, CT 06867  
PHONE (860) 263-5800

in association with  
**BLACK & VEATCH**

**CONTRACT NO. 2015B-27**  
**SOUTH HARTFORD CONVEYANCE AND STORAGE TUNNEL**

**CONTRACT 2**  
**RETRIEVAL SHAFT SITE & UTILITY LAYOUT PLAN**  
CIVIL

PLAN NUMBER	
SHEET NO.	230 C-102



**PLAN**

SCALE: 1"=20'



SCALE: 1" = 20'

**NOTES:**

1. FOR LEGEND SEE SHEET 200 C-001.
2. FOR GENERAL NOTES AND ABBREVIATIONS SEE SHEET 200 C-002.

VERTICAL DATUM IS NGVD 29  
HORIZONTAL DATUM IS NAD 83/92

**MDC**  
The Metropolitan District  
555 Main Street  
Hartford, Connecticut

REV. NO.	DATE	DRWN	CHKD	REMARKS
1	7/16/15	SG	JS	REVISED DRIVEWAY WIDTH AND FENCE LINE PER TOWN REVIEW COMMENT

FILE NAME:	230 C-103
DESIGNED BY:	S. GANESH
DRAWN BY:	M. THIBODEAU
CHK'D BY:	R. BERLANDY
X-CHK'D BY:	J. SULLIVAN
APPROVED BY:	J. SULLIVAN
DATE:	MAY 2015

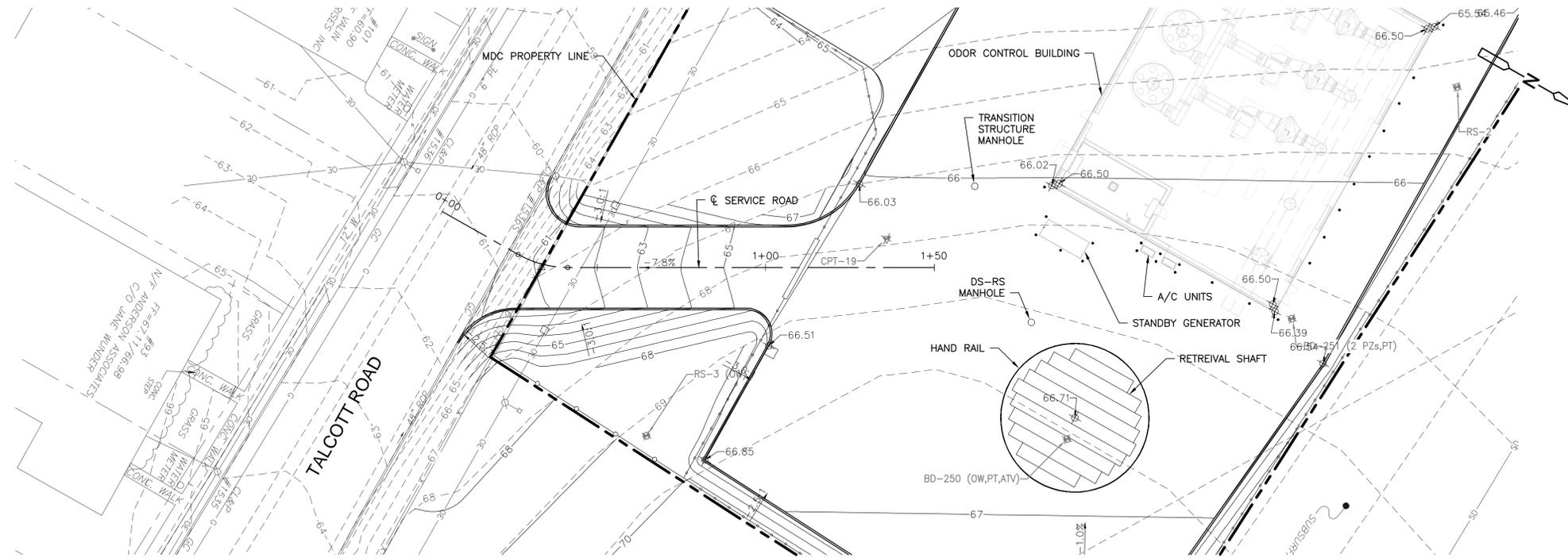
**AECOM** 500 ENTERPRISE DRIVE, SUITE 1A  
ROCKY HILL, CT 06867  
PHONE (860) 263-5800

in association with  
**BLACK & VEATCH**

**CONTRACT NO. 2015B-27**  
**SOUTH HARTFORD CONVEYANCE AND STORAGE TUNNEL**

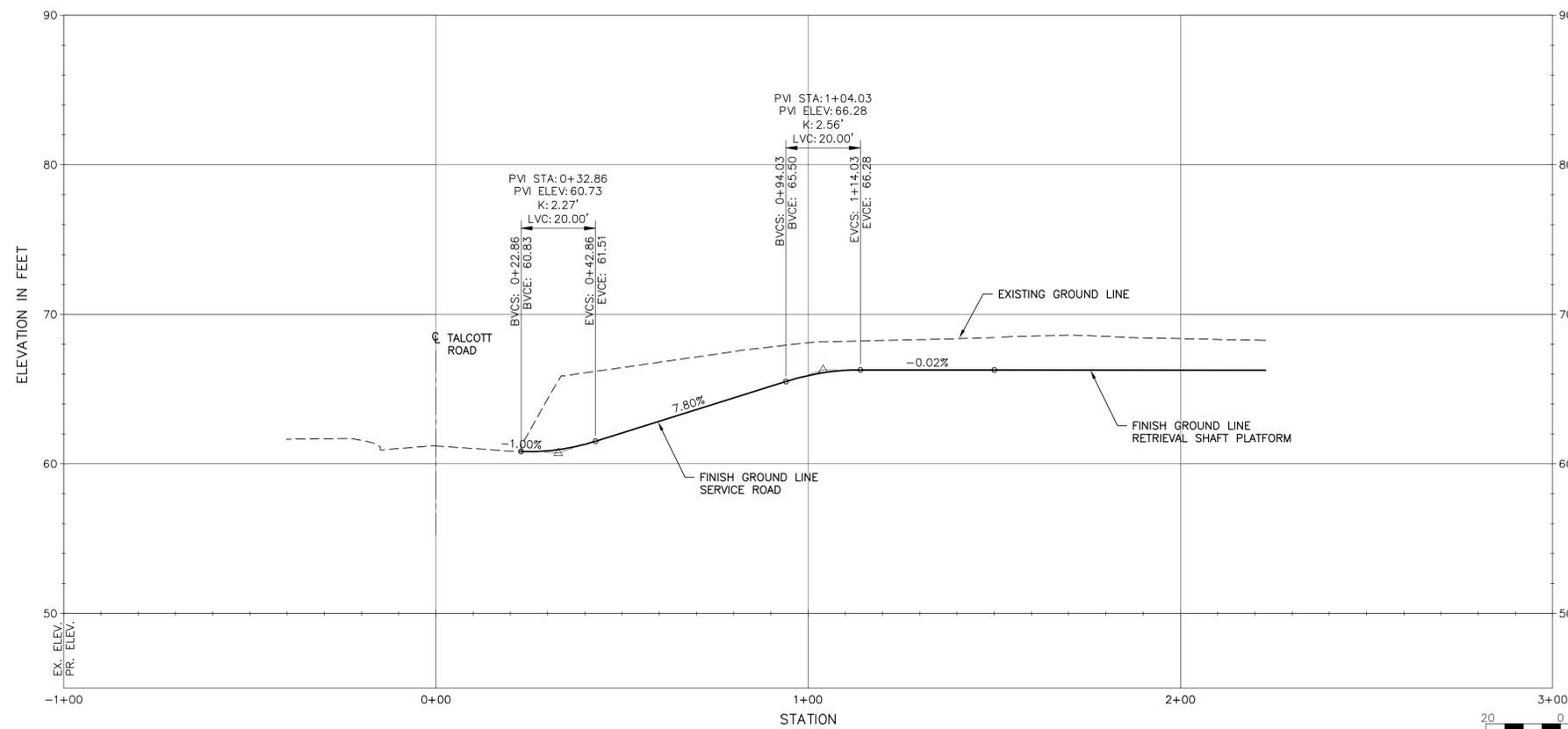
**CONTRACT 2**  
**RETRIVAL SHAFT GRADING & DRAINAGE PLAN**  
CIVIL

PLAN NUMBER	
SHEET NO.	230 C-103



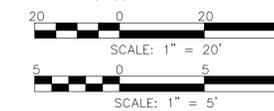
**PLAN**

SCALE: 1"=20'



**PROFILE**

SCALE: 1"=20' HOR.  
1"= 5' VERT.



**NOTES:**

- FOR LEGEND SEE SHEET 200 C-001.
- FOR GENERAL NOTES AND ABBREVIATIONS SEE SHEET 200 C-002.

VERTICAL DATUM IS NGVD 29  
HORIZONTAL DATUM IS NAD 83/92

REV. NO.	DATE	DRWN	CHKD	REMARKS
1	7/16/15	SG	JS	REVISED DRIVEWAY WIDTH AND FENCE LINE PER TOWN REVIEW COMMENT

FILE NAME: 230 C-104  
DESIGNED BY: S.GANESH  
DRAWN BY: M.THIBODEAU  
CHK'D BY: R.BERLANDY  
X-CHK'D BY: J.SULLIVAN  
APPROVED BY: J. SULLIVAN  
DATE: MAY 2015



500 ENTERPRISE DRIVE, SUITE 1A  
ROCKY HILL, CT 06067  
PHONE (860) 263-5800



CONTRACT NO. 2015B-27  
SOUTH HARTFORD CONVEYANCE AND  
STORAGE TUNNEL

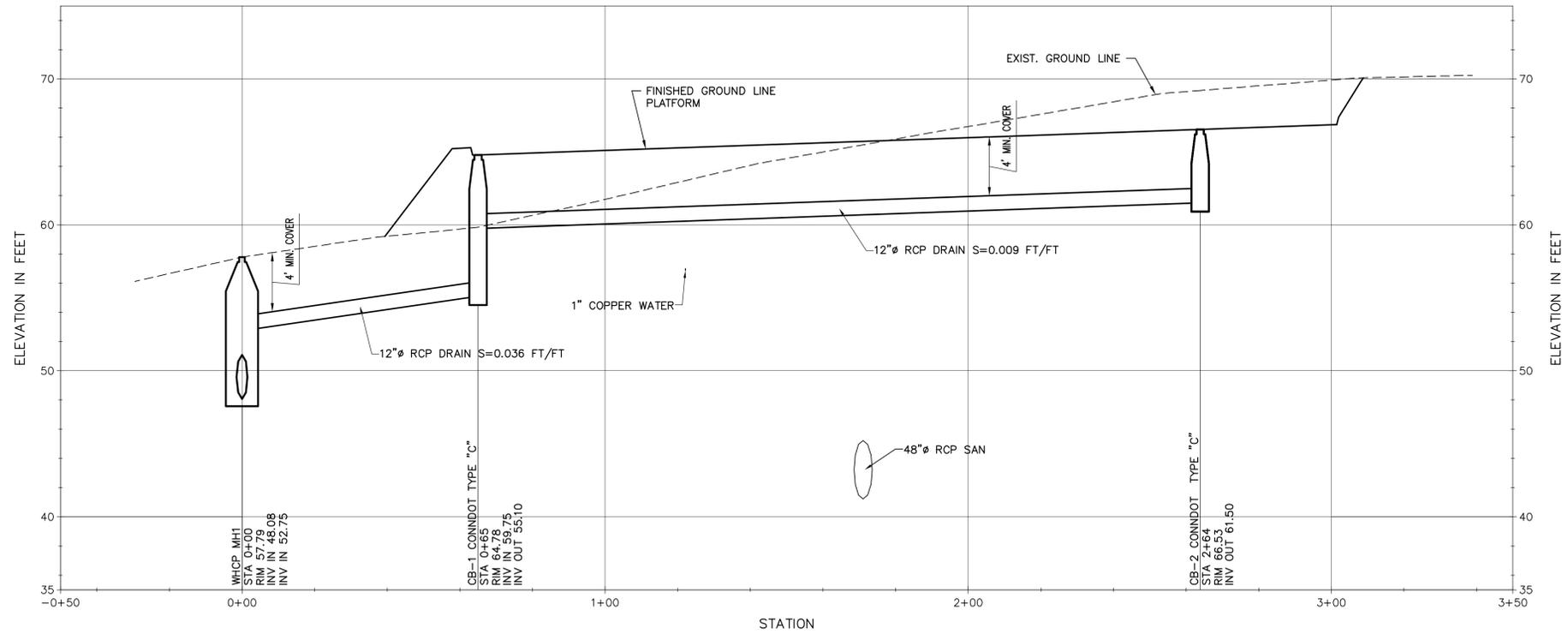
CONTRACT 2  
RETRIEVAL SHAFT ENTRANCE ROAD  
PLAN AND PROFILE

CIVIL

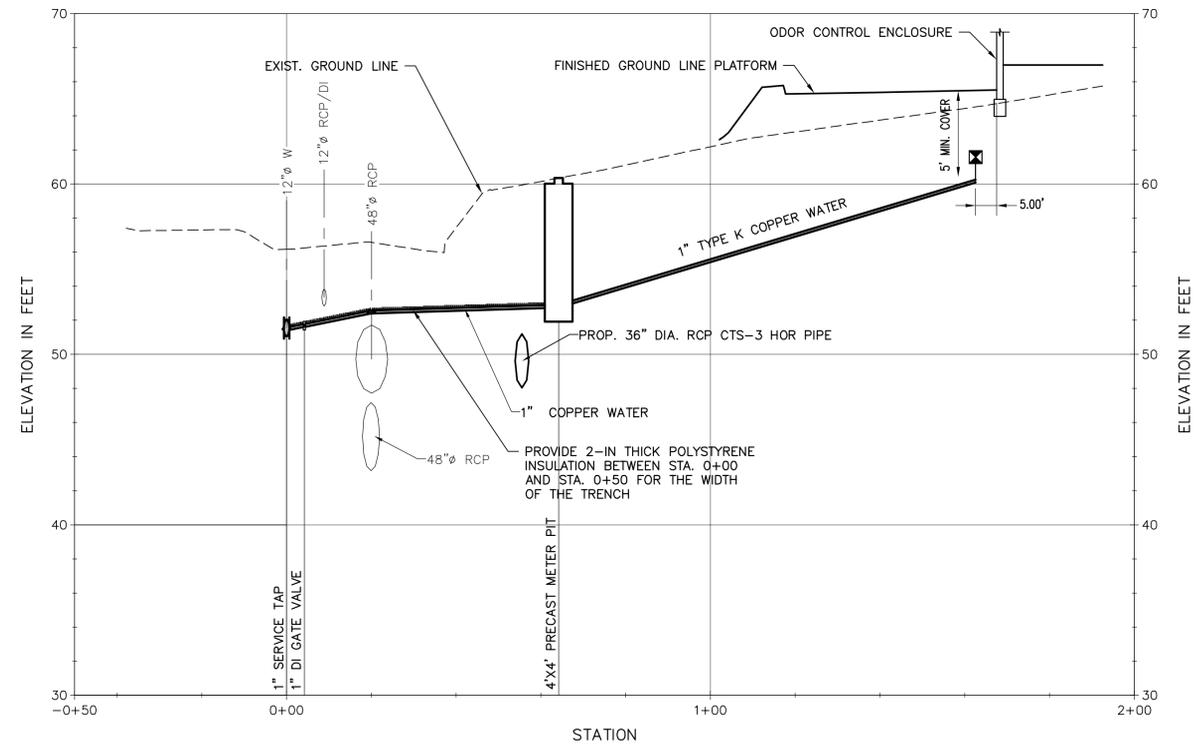
PLAN NUMBER

SHEET NO.

230 C-104



**12" RCP STORM SEWER PROFILE**



**1-INCH TYPE K COPPER WATER SERVICE PROFILE**

**NOTES:**  
 1. FOR LEGEND SEE SHEET 200 C-001.  
 2. FOR GENERAL NOTES AND ABBREVIATIONS SEE SHEET 200 C-002.

20 0 20 40  
 SCALE: 1" = 20'  
 5 0 5 10  
 SCALE: 1" = 5'

SCALE: 1"=20' HORIZ. 1"= 5' VERT. VERTICAL DATUM IS NGVD 29 HORIZONTAL DATUM IS NAD 83/92

**MDC**  
 The Metropolitan District  
 555 Main Street  
 Hartford, Connecticut

REV. NO.	DATE	DRWN	CHKD	REMARKS

FILE NAME: 230 C-105  
 DESIGNED BY: S.GANESH  
 DRAWN BY: M.THIBODEAU  
 CHK'D BY: R.BERLANDY  
 X-CHK'D BY: J.SULLIVAN  
 APPROVED BY: J. SULLIVAN  
 DATE: MAY 2015

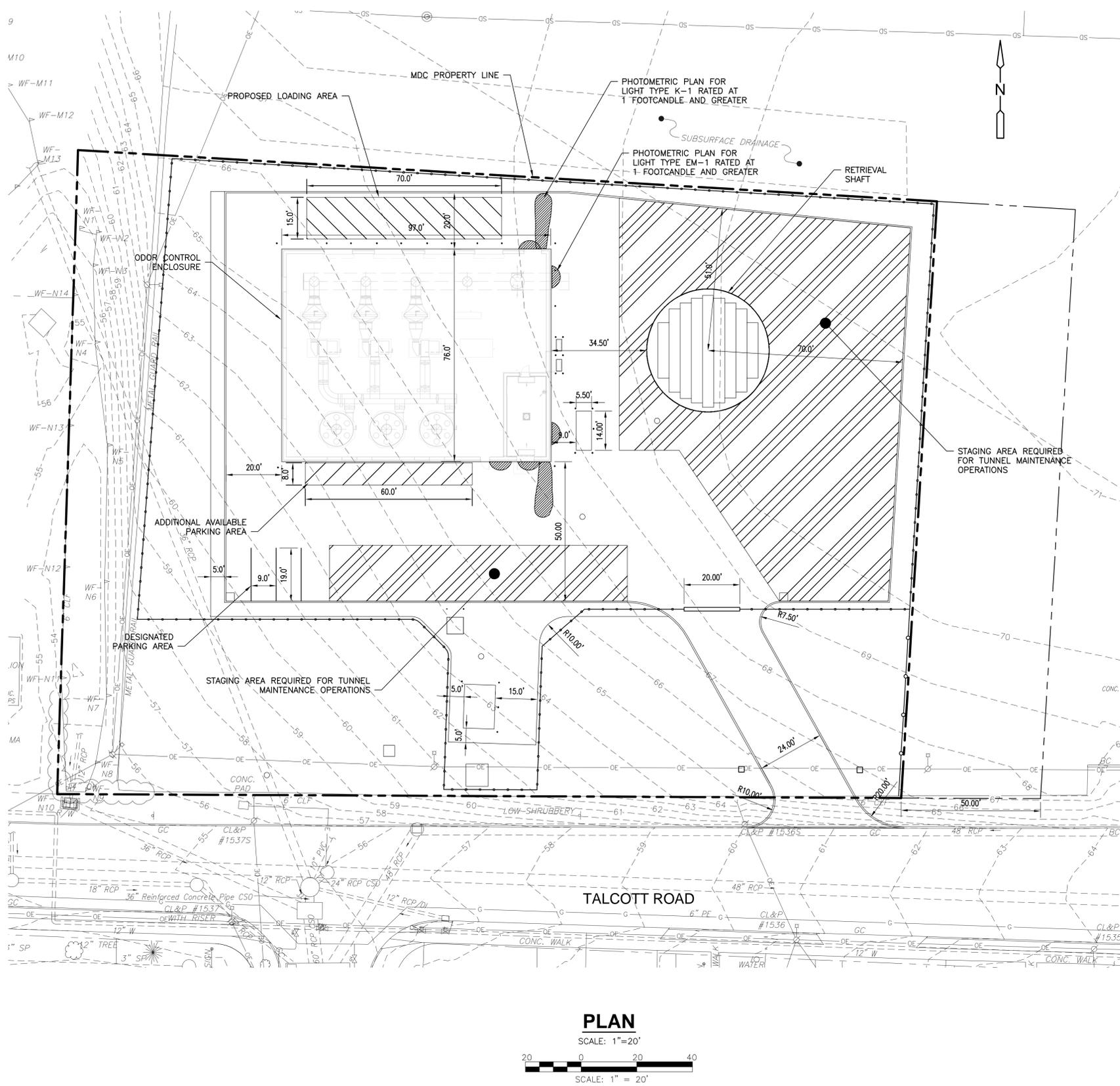
**AECOM** 500 ENTERPRISE DRIVE, SUITE 1A  
 ROCKY HILL, CT 06067  
 PHONE (860) 263-5800

in association with  
**BLACK & VEATCH**

CONTRACT NO. 2015B-27  
 SOUTH HARTFORD CONVEYANCE AND  
 STORAGE TUNNEL

CONTRACT 2  
**RETRIEVAL SHAFT UTILITY PROFILES**  
 CIVIL

PLAN NUMBER  
 SHEET NO.  
**230 C-105**



**ZONING COMPLIANCE CHART**  
(Article III: District Use Regulations §177-6 C. Schedule of Permitted Accessory Uses)

Site Condition	Unit / Parameter/ Compliance Status	Town of West Hartford Zoning Regulation
<b>Existing</b>		
Area of Multi-Family Residence District (RM-3)	17,977 SF	
Area of Restricted Industrial District (IR)	50,977 SF	
<b>Proposed Special Development District (Zone IR)</b>		
Area of Retrieval Shaft / Air Treatment Facility Site	67,977 SF	
Area of Air Treatment Facility	7,375 SF	
Floor Area Ratio	0.11	Article I: General Provisions §177-2
Height of Air Treatment Facility	20 feet	
Height of Site Perimeter Security Fencing	The final design includes an 8-ft decorative industrial steel perimeter fence. Applicant has requested a modification to §177-20 Obstruction in yards (C. and D.(1))	Article IV: General Regulations §177-20 <i>Fences not exceeding seven feet in height are allowed only in any required side or rear yard. No structure shall be erected between the building line and the street line, except a wall or fence not over four feet in height.</i>
Lighting	All on-site lighting has been specified to be shielded. Refer to the site Photometric Plan (Sheet 230-C-106).	Article IV: General Regulations §177-25 <i>Any outdoor lighting shall be so shielded that the light source cannot be seen from adjacent properties.</i>
Drainage	The majority of surface water runoff will flow to a perimeter gutter, and catch basin located in the southwest corner of the site (Sheet 230 C-103). The gutter channel, catch basin, and 12-inch drain line have been sized to accept and transport the peak runoff from the 10-year storm event without ponding or surcharging. The overall site plan reduces the impervious surface by 23,524 SF (39%), resulting in improved stormwater runoff quality.	Article IV: General Regulations §177-27 <i>No structure shall be erected, and no land shall be graded or hard-surfaced, unless provisions have been made and approved by the Department of Community Services for the proper disposal of drainage water.</i>
Parking	The site will be unmanned, with only periodic visits for routine maintenance and site checks. The site includes 4 striped parking spaces, and 1 loading zone area.	Article IV: General Regulations §177-32 <i>Industrial facilities must include 1 parking space per 2 employees, and 1 loading zone (for buildings 0-50,000 SF).</i>
Signage	The site will include 1 sign attached to the perimeter fencing. The total area of the sign is 1.5 SF. The site will include decorative stone entrance pillars that will contain the MDC logo and street number.	Article IV: General Regulations §177-33 <i>Signs in industrial districts advertising the use of the land are permitted. There may not be more than one freestanding sign on a property. The total sign area shall not exceed 18 square feet of area on a single-faced sign.</i>
Screening and Landscaping	The proposed site landscaping has incorporated features from two screening and landscaping prototypes specified by the Town of West Hartford: Type A and Type B (§177-34 Part D).	Article IV: General Regulations §177-34 <i>Standards are intended to reduce excessive heat, glare and accumulation of dust, to provide privacy from noise and visual intrusion and to prevent the erosion of the soil, excessive runoff of drainage water and the consequent depletion of the groundwater table and the pollution of water bodies.</i>

- NOTES:**
- FOR LEGEND SEE SHEET 200 C-001.
  - FOR GENERAL NOTES AND ABBREVIATIONS SEE SHEET 200 C-002.
  - FOR LANDSCAPING DETAILS SEE SHEET 230 C-141
  - FOR ELECTRICAL SITE PLAN SEE SHEET 230 E-101
- VERTICAL DATUM IS NGVD 29  
HORIZONTAL DATUM IS NAD 83/92

**MDC**  
The Metropolitan District  
555 Main Street  
Hartford, Connecticut

REV. NO.	DATE	DRWN	CHKD	REMARKS

TALCOTT SITE  
LOADING AREA  
DESIGNED BY: S. GANESH  
DRAWN BY: M. THIBODEAU  
CHK'D BY: R. BERLANDY  
X-CHK'D BY: J. SULLIVAN  
APPROVED BY: J. SULLIVAN  
DATE: MAY 2015

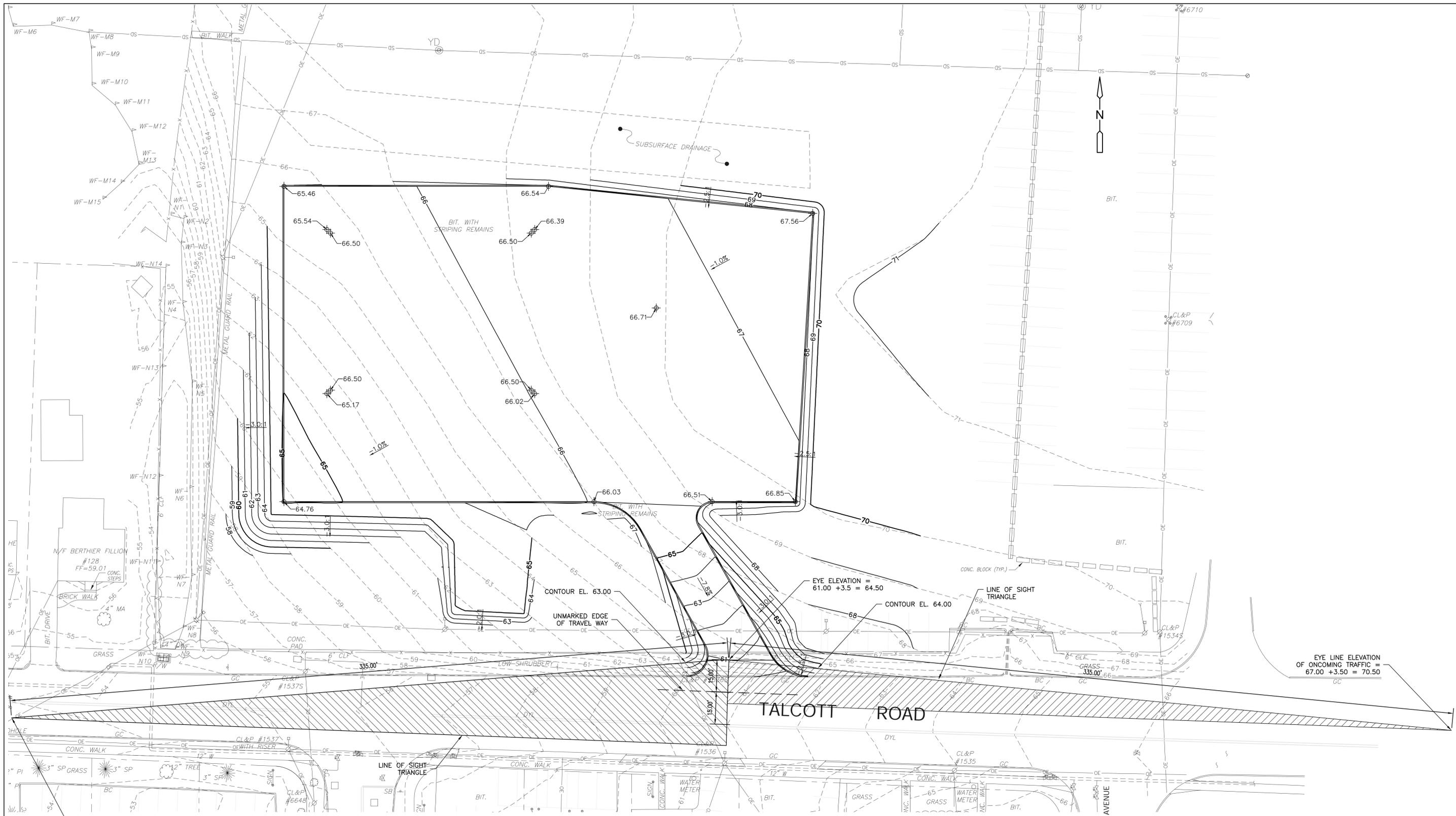
**AECOM** 500 ENTERPRISE DRIVE, SUITE 1A  
ROCKY HILL, CT 06867  
PHONE (860) 263-5800

in association with  
**BLACK & VEATCH**

CONTRACT NO. 2015B-27  
SOUTH HARTFORD CONVEYANCE AND  
STORAGE TUNNEL

CONTRACT 2  
RETRIEVAL SHAFT SITE  
PARKING, PHOTOMETRIC & LOADING  
AREA PLAN  
CIVIL

PLAN NUMBER  
SHEET NO.  
**230 C-106**



**PLAN**

SCALE: 1"=20'



SCALE: 1" = 20'

EYE LINE ELEVATION OF ONCOMING TRAFFIC = 54.00 + 3.50 = 57.50

EYE ELEVATION = 61.00 + 3.5 = 64.50

EYE LINE ELEVATION OF ONCOMING TRAFFIC = 67.00 + 3.50 = 70.50

**NOTES:**

1. FOR LEGEND SEE SHEET 200 C-001.
2. FOR GENERAL NOTES AND ABBREVIATIONS SEE SHEET 200 C-002.

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**MDC**  
The Metropolitan District  
555 Main Street  
Hartford, Connecticut

REV. NO.	DATE	DRWN	CHKD	REMARKS

SIGHT DISTANCES	
FILE NAME:	DISTANCES
DESIGNED BY:	S. GANESH
DRAWN BY:	M. THIBODEAU
CHK'D BY:	R. BERLANDY
X-CHK'D BY:	J. SULLIVAN
APPROVED BY:	J. SULLIVAN
DATE:	MAY 2015

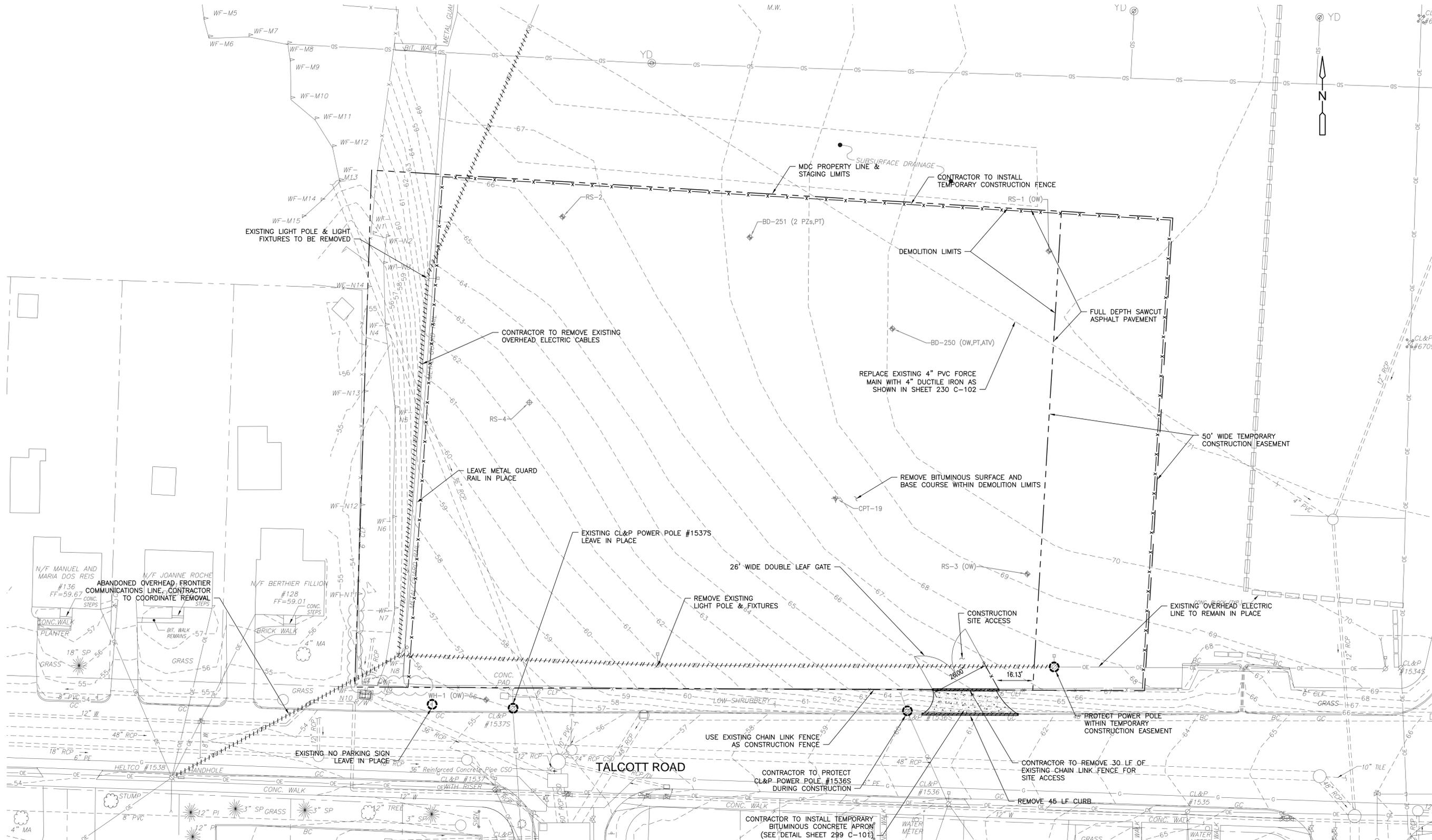
**AECOM** 500 ENTERPRISE DRIVE, SUITE 1A  
ROCKY HILL, CT 06867  
PHONE (860) 263-5800

in association with  
**BLACK & VEATCH**

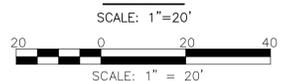
**CONTRACT NO. 2015B-27**  
**SOUTH HARTFORD CONVEYANCE AND STORAGE TUNNEL**

**CONTRACT 2**  
**INTERSECTION SIGHT DISTANCES AT TALCOTT ROAD**  
CIVIL

PLAN NUMBER  
SHEET NO.  
**230 C-107**



**PLAN**



**NOTES:**

1. FOR LEGEND SEE SHEET 200 C-001.
2. FOR GENERAL NOTES AND ABBREVIATIONS SEE SHEET 200 C-002.
3. SEE SPECIFICATION SECTION 02050 FOR DEMOLITION AND MODIFICATIONS

VERTICAL DATUM IS NGVD 29  
HORIZONTAL DATUM IS NAD 83/92

**MDC**  
The Metropolitan District  
555 Main Street  
Hartford, Connecticut

REV. NO.	DATE	DRWN	CHKD	REMARKS

FILE NAME: 230_C-111
DESIGNED BY: S.GANESH
DRAWN BY: M.THIBODEAU
CHK'D BY: R.BERLANDY
X-CHK'D BY: J.SULLIVAN
APPROVED BY: J.SULLIVAN
DATE: MAY 2015

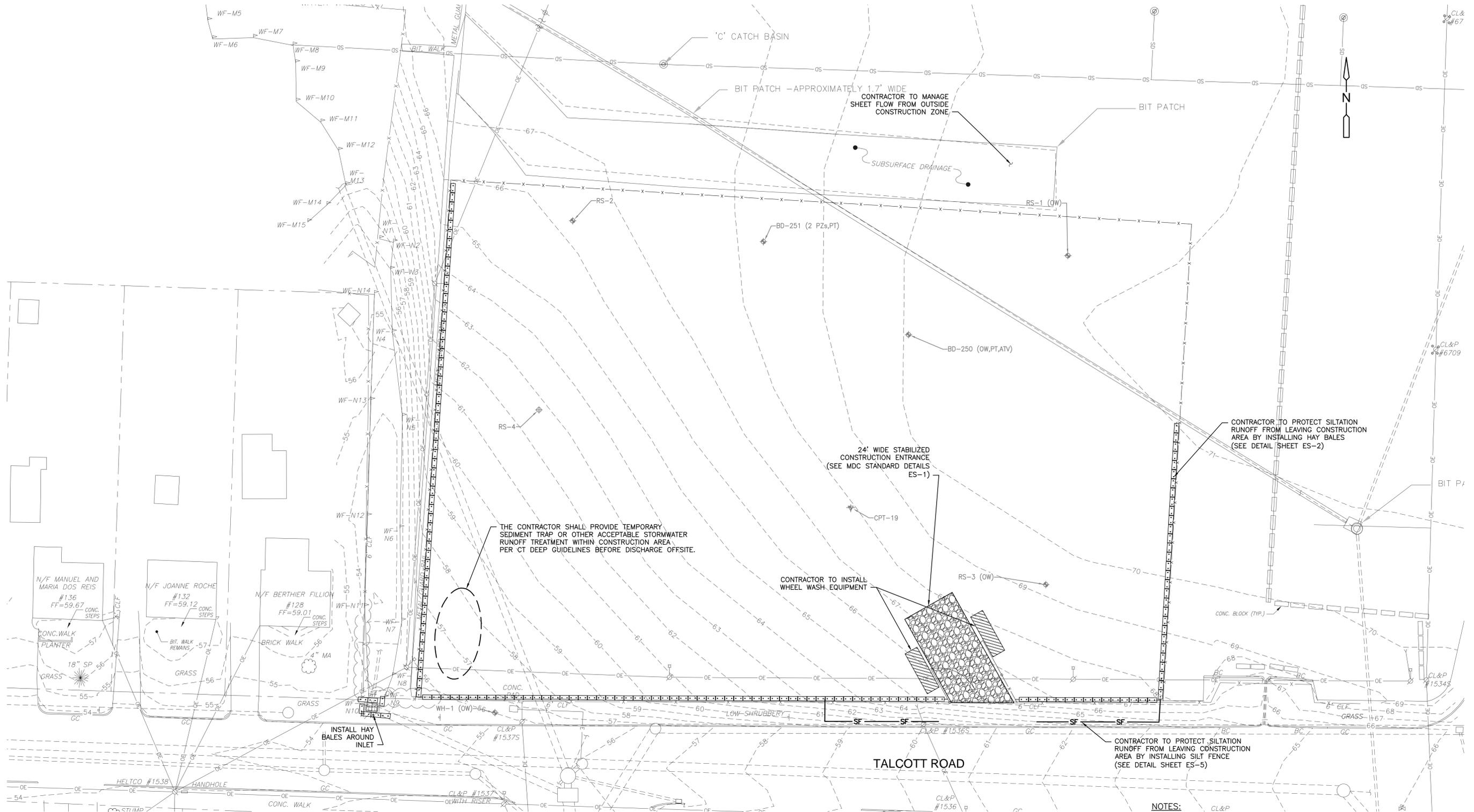
**AECOM** 500 ENTERPRISE DRIVE, SUITE 1A  
ROCKY HILL, CT 06067  
PHONE (860) 263-5800

in association with  
**BLACK & VEATCH**

**CONTRACT NO. 2015B-27**  
**SOUTH HARTFORD CONVEYANCE AND STORAGE TUNNEL**

**CONTRACT 2**  
**SITE PREP-DEMO-STAGING AT RETRIEVAL SHAFT**  
CIVIL

PLAN NUMBER
SHEET NO.
<b>230 C-111</b>



THE CONTRACTOR SHALL PROVIDE TEMPORARY SEDIMENT TRAP OR OTHER ACCEPTABLE STORMWATER RUNOFF TREATMENT WITHIN CONSTRUCTION AREA PER CT DEEP GUIDELINES BEFORE DISCHARGE OFFSITE.

24' WIDE STABILIZED CONSTRUCTION ENTRANCE (SEE MDC STANDARD DETAILS ES-1)

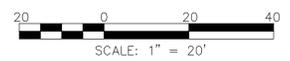
CONTRACTOR TO INSTALL WHEEL WASH EQUIPMENT

CONTRACTOR TO PROTECT SILTATION RUNOFF FROM LEAVING CONSTRUCTION AREA BY INSTALLING HAY BALES (SEE DETAIL SHEET ES-2)

CONTRACTOR TO PROTECT SILTATION RUNOFF FROM LEAVING CONSTRUCTION AREA BY INSTALLING SILT FENCE (SEE DETAIL SHEET ES-5)

**PLAN**

SCALE: 1" = 20'



**NOTES:**

1. FOR LEGEND SEE SHEET 200 C-001.
2. FOR GENERAL NOTES AND ABBREVIATIONS SEE SHEET 200 C-002.
3. THE TEMPORARY EROSION CONTROL AND STORMWATER MANAGEMENT TECHNIQUES PRESENTED HEREIN ARE TO BE USED BY THE CONTRACTOR AS A GUIDELINE FOR HIS CONSTRUCTION PERMIT APPLICATION WITH CT DEEP AND MAY VARY BASED ON HIS ADOPTED MEANS AND METHODS.
4. THE CONTRACTOR MAY STOCKPILE MUCK WITHIN THE STAGING LIMITS DURING THE PERIOD OF CONSTRUCTION. AFTER CONSTRUCTION THE CONTRACTOR SHALL REMOVE STOCKPILE AND RESTORE THE STOCKPILE AREA TO ITS ORIGINAL STATE. ALL MDC STANDARD STOCKPILING AREA DETAILS SHOULD BE ADHERED TO IN SUCH CASES.

VERTICAL DATUM IS NGVD 29  
HORIZONTAL DATUM IS NAD 83/92

**MDC**  
The Metropolitan District  
555 Main Street  
Hartford, Connecticut

REV. NO.	DATE	DRWN	CHKD	REMARKS

FILE NAME: 230 C-121
DESIGNED BY: S.GANESH
DRAWN BY: M.THIBODEAU
CHK'D BY: R.BERLANDY
X-CHK'D BY: J.SULLIVAN
APPROVED BY: J. SULLIVAN
DATE: MAY 2015

**AECOM** 500 ENTERPRISE DRIVE, SUITE 1A  
ROCKY HILL, CT 06867  
PHONE (860) 263-5800

in association with  
**BLACK & VEATCH**

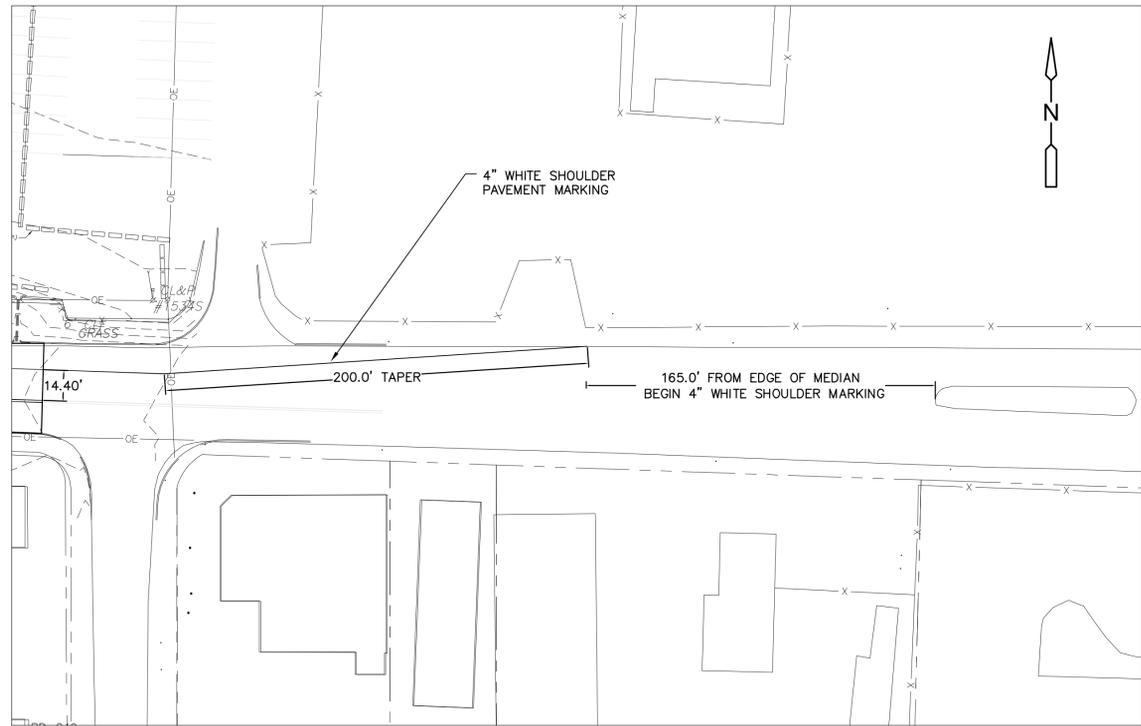
CONTRACT NO. 2015B-27  
SOUTH HARTFORD CONVEYANCE AND  
STORAGE TUNNEL

CONTRACT 2

**TEMPORARY EROSION CONTROL &  
STORMWATER MGMT DURING CONSTRUCTION**

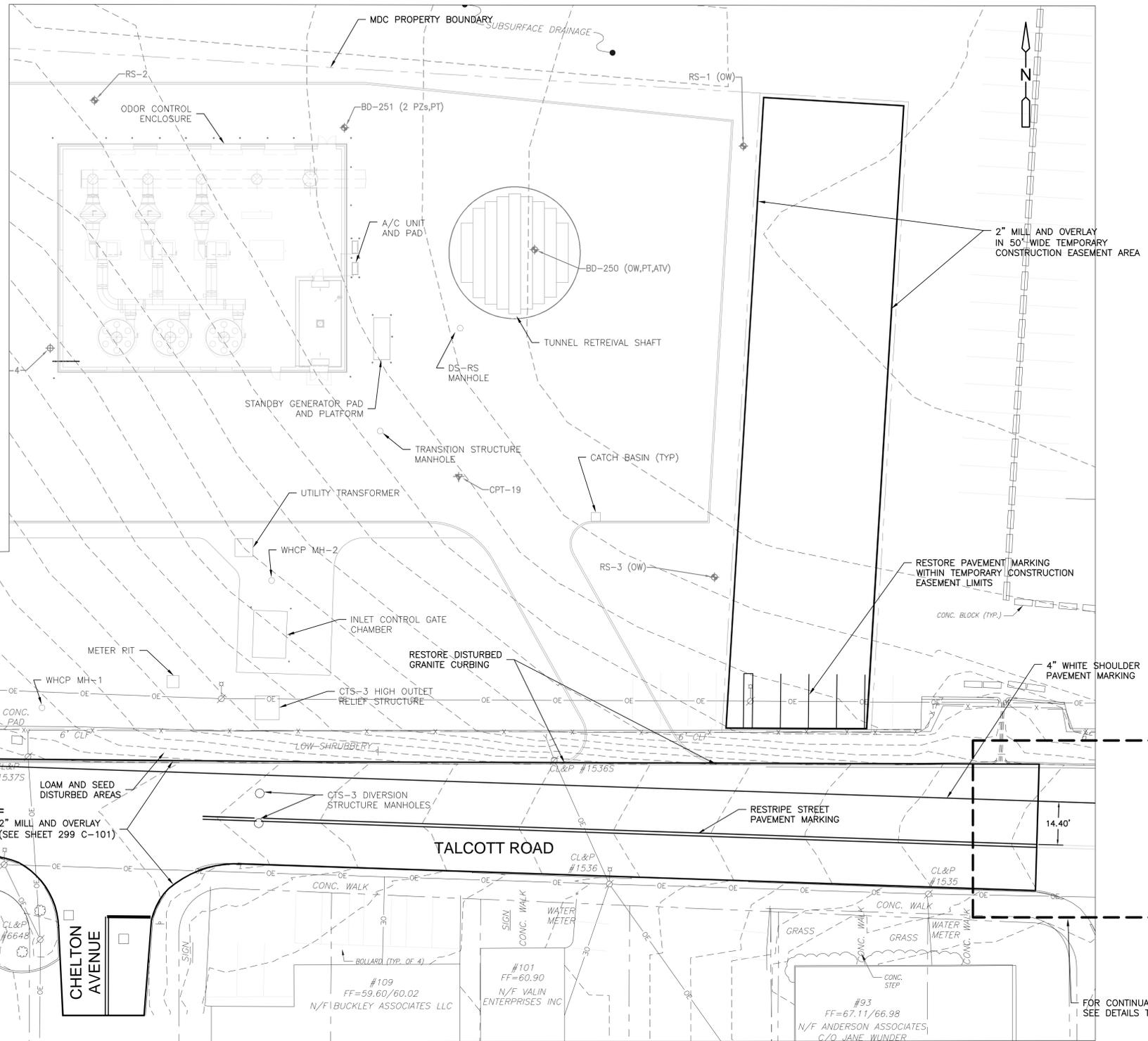
CIVIL

PLAN NUMBER
SHEET NO.
<b>230 C-121</b>



**PLAN**

SCALE: 1"=40'



**PLAN**

SCALE: 1"=20'



**NOTES:**

1. FOR LEGEND SEE SHEET 200 C-001.
2. FOR GENERAL NOTES AND ABBREVIATIONS SEE SHEET 200 C-002.
3. THE COORDINATES SHOWN IN THIS SHEET ARE APPROXIMATE MILLING AND OVERLAY LIMITS
4. FOR PROPOSED SITE PLAN SEE SHEET 230 C-102
5. FOR LANDSCAPING PLAN SEE SHEET 230 C-144
6. FOR CTS-3 DIVERSION STRUCTURE STAGING AREA SEE SHEET 240 C-111
7. FOR MAINTENANCE AND PROTECTION OF TRAFFIC IN TALCOTT STREET SEE SHEET 602 T-103

VERTICAL DATUM IS NGVD 29  
HORIZONTAL DATUM IS NAD 83/92

**MDC**  
The Metropolitan District  
555 Main Street  
Hartford, Connecticut

REV. NO.	DATE	DRWN	CHKD	REMARKS
1	7/16/15	SG	JS	REVISED PAVEMENT MARKING AND MILL AND OVERLAY LIMITS

FILE NAME: 230\_C-131  
DESIGNED BY: S.GANESH  
DRAWN BY: M.THIBODEAU  
CHK'D BY: R.BERLANDY  
X-CHK'D BY: J.SULLIVAN  
APPROVED BY: J.SULLIVAN  
DATE: MAY 2015

**AECOM** 500 ENTERPRISE DRIVE, SUITE 1A  
ROCKY HILL, CT 06867  
PHONE (860) 263-5800

in association with  
**BLACK & VEATCH**

CONTRACT NO. 2015B-27  
SOUTH HARTFORD CONVEYANCE AND  
STORAGE TUNNEL

CONTRACT 2  
**RETRIEVAL SHAFT SITE & TALCOTT ROAD  
RESTORATION PLAN**  
CIVIL

PLAN NUMBER

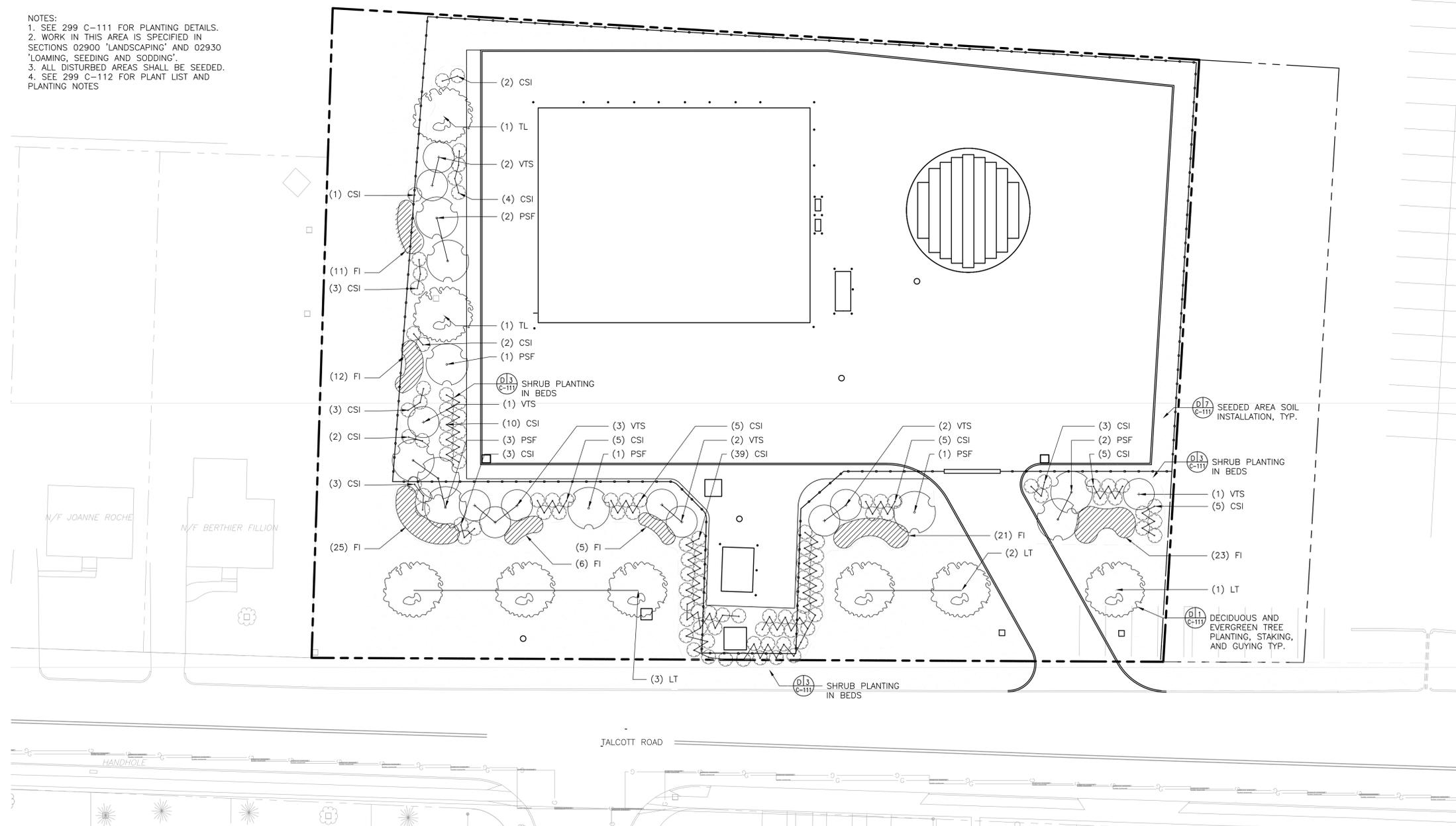
SHEET NO.

**230 C-131**

FOR CONTINUATION  
SEE DETAILS THIS SHEET



- NOTES:  
 1. SEE 299 C-111 FOR PLANTING DETAILS.  
 2. WORK IN THIS AREA IS SPECIFIED IN SECTIONS 02900 "LANDSCAPING" AND 02930 "LOAMING, SEEDING AND SODDING".  
 3. ALL DISTURBED AREAS SHALL BE SEEDED.  
 4. SEE 299 C-112 FOR PLANT LIST AND PLANTING NOTES



**PLAN**  
 0 5 10 20  
 SCALE IN FEET

VERTICAL DATUM IS NGVD 29  
 HORIZONTAL DATUM IS NAD 83/92



**The Metropolitan District**  
 555 Main Street  
 Hartford, Connecticut

REV. NO.	DATE	DRWN	CHKD	REMARKS

FILE NAME: 230 C-144  
 DESIGNED BY: A.LAVALLEE  
 DRAWN BY: H.BEALL  
 CHK'D BY: V.AYMER  
 X-CHK'D BY: B.CANTERBURY  
 APPROVED BY: J.SULLIVAN  
 DATE: MAY 2015



500 ENTERPRISE DRIVE, SUITE 1A  
 ROCKY HILL, CT 06067  
 PHONE (860) 263-5800

in association with  
  
**BLACK & VEATCH**

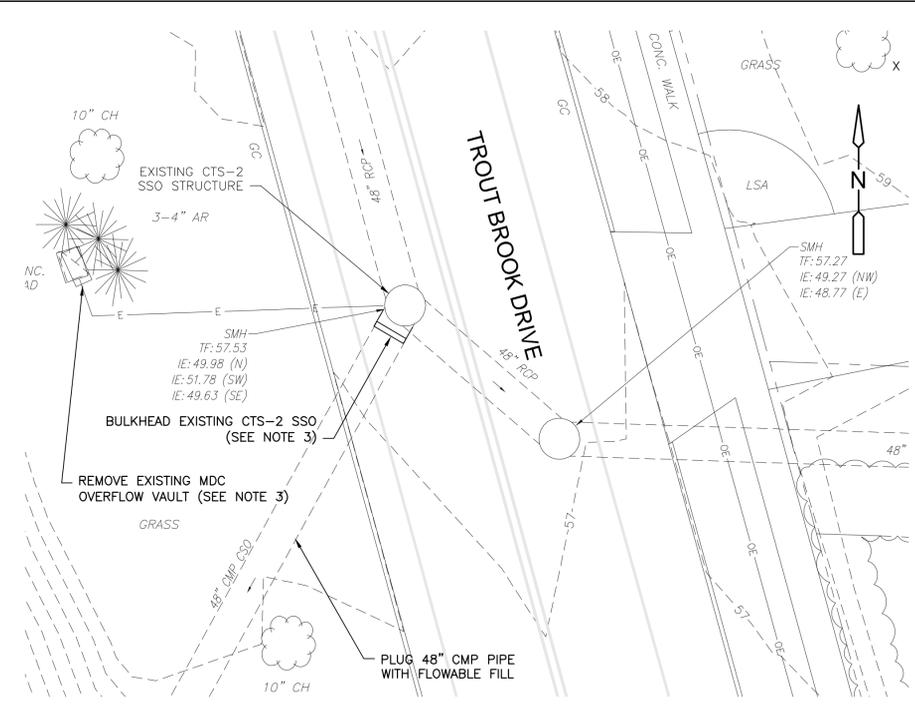
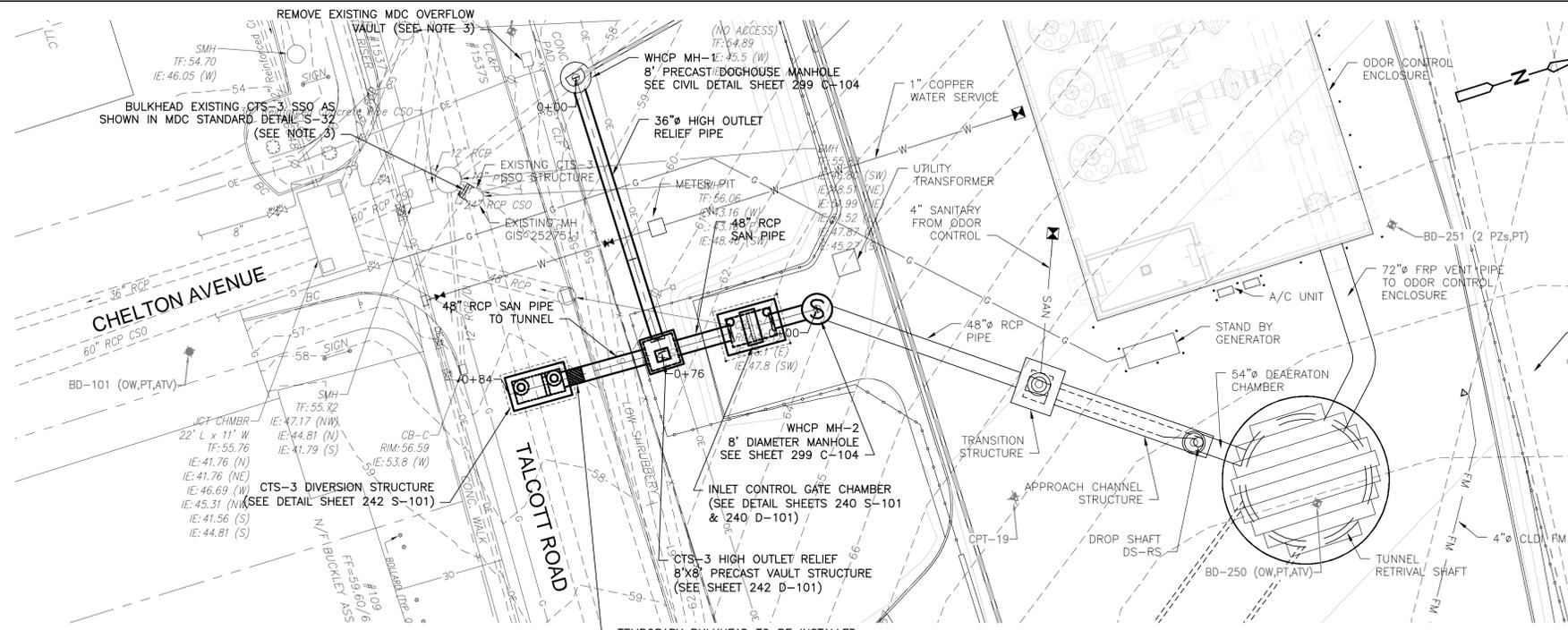
**CONTRACT NO. 2015B-27**  
**SOUTH HARTFORD CONVEYANCE AND STORAGE TUNNEL**

**CONTRACT 2**  
**RETRIEVAL SHAFT FINAL SITE**  
**- PLANTING PLAN**  
 LANDSCAPE

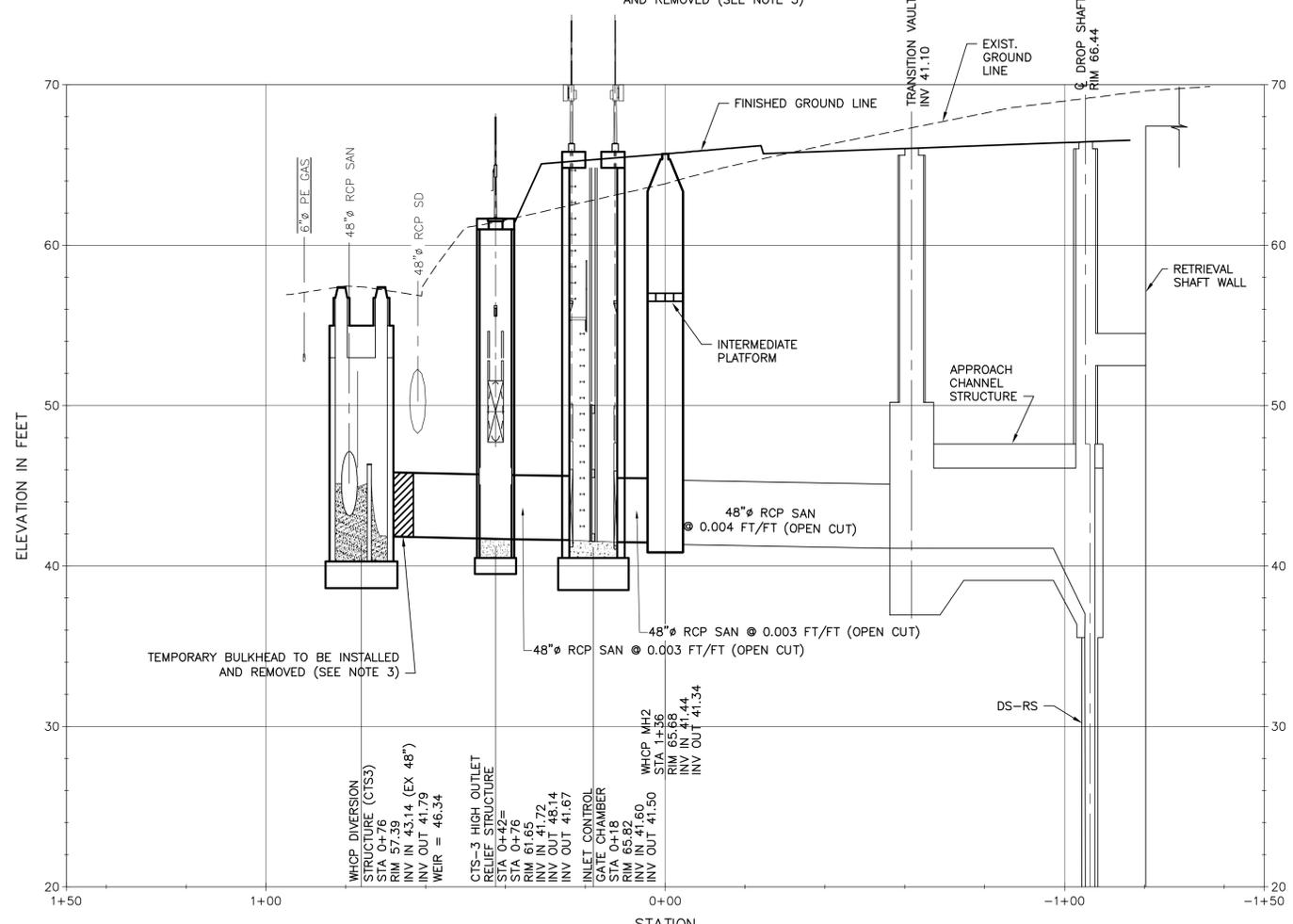
PLAN NUMBER

SHEET NO.

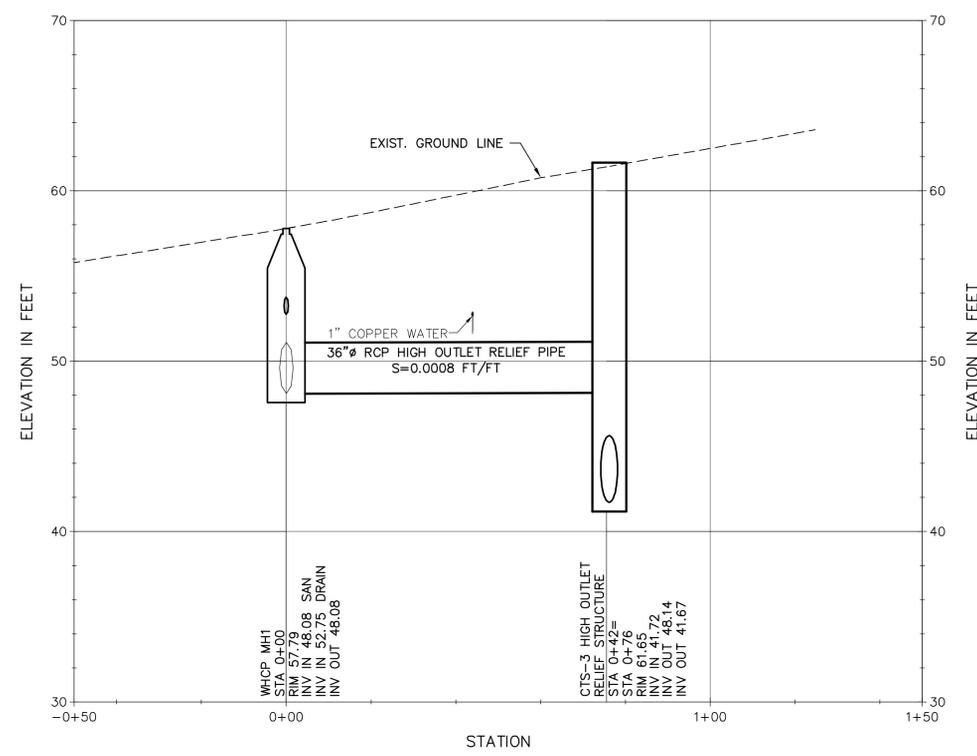
230 C-144



**PLAN**  
SCALE: 1"=20'



**PROFILE**  
SCALE: 1"=20' HORIZ.  
1"=5' VERT.



**HIGH OUTLET RELIEF PROFILE**  
SCALE: 1"=20' HORIZ.  
1"=5' VERT.

- NOTES:**
- FOR LEGEND SEE SHEET 200 C-001.
  - FOR GENERAL NOTES AND ABBREVIATIONS SEE SHEET 200 C-002.
  - COORDINATE SEQUENCE OF CONSTRUCTION WITH REQUIREMENTS SPECIFIED IN SPECIFICATION SECTION 01143

VERTICAL DATUM IS NGVD 29  
HORIZONTAL DATUM IS NAD 83/92

**MDC**  
The Metropolitan District  
555 Main Street  
Hartford, Connecticut

REV. NO.	DATE	DRWN	CHKD	REMARKS
1	7/16/15	SG	JS	REVISED CTS-2 OVERFLOW PIPE PLUG BASED ON TOWN COMMENT

FILE NAME: 240 C-101
DESIGNED BY: S.GANESH
DRAWN BY: M. THIBODEAU
CHK'D BY: R. BERLANDY
X-CHK'D BY: J. SULLIVAN
APPROVED BY: J. SULLIVAN
DATE: MAY 2015

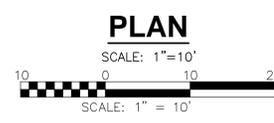
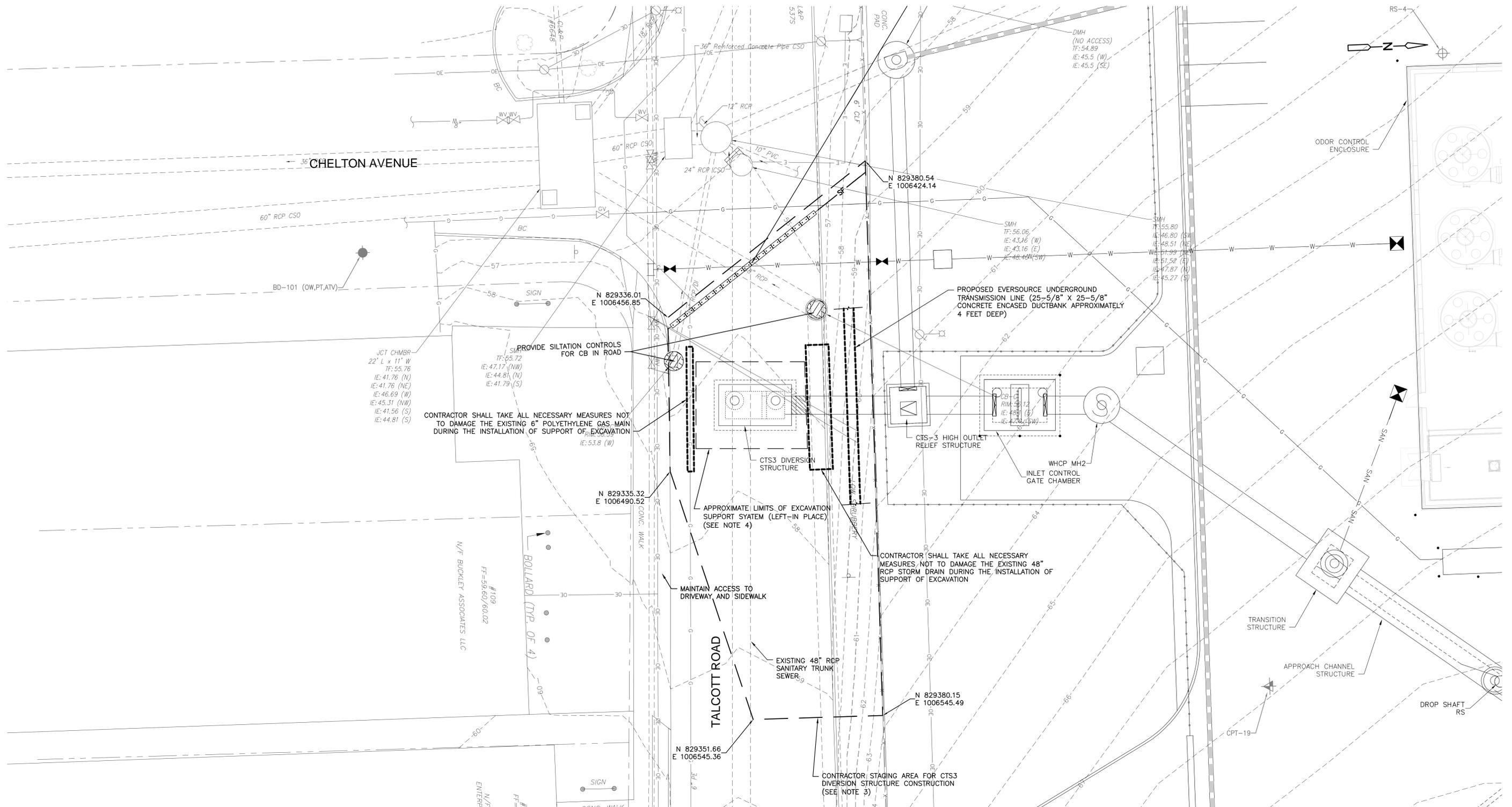
**AECOM** 500 ENTERPRISE DRIVE, SUITE 1A  
ROCKY HILL, CT 06067  
PHONE (860) 263-5800

in association with  
**BLACK & VEATCH**

CONTRACT NO. 2015B-27  
SOUTH HARTFORD CONVEYANCE AND STORAGE TUNNEL

CONTRACT 2  
**WEST HARTFORD CONSOLIDATION CONDUIT PLAN AND PROFILE**  
CIVIL

PLAN NUMBER  
SHEET NO.  
**240 C-101**



- NOTES:**
1. FOR LEGEND SEE SHEET 200 C-001.
  2. FOR GENERAL NOTES AND ABBREVIATIONS SEE SHEET 200 C-002.
  3. SEE MAINTENANCE & PROTECTION OF TRAFFIC SHEETS FOR TRAFFIC DETOUR PLAN.
  4. THE LIMITS OF EXCAVATION SUPPORT SYSTEM SHOWN HEREIN ARE APPROXIMATE. CONTRACTORS SHALL SELECT EXCAVATION DIMENSIONS BASED ON HIS MEANS AND METHODS, CONSTRUCTION TOLERANCES AND OTHER LIMITATIONS NOTED HEREIN.

VERTICAL DATUM IS NGVD 29  
 HORIZONTAL DATUM IS NAD 83/92

**MDC**  
**The Metropolitan District**  
 555 Main Street  
 Hartford, Connecticut

REV. NO.	DATE	DRWN	CHKD	REMARKS
1	7/16/15	SG	JS	ADDED PROPOSED EVERSOURCE DUCTBANK

FILE NAME:	240_C-111
DESIGNED BY:	S. GANESH
DRAWN BY:	M. THIBODEAU
CHK'D BY:	R. BERLANDY
X-CHK'D BY:	J. SULLIVAN
APPROVED BY:	J. SULLIVAN
DATE:	MAY 2015

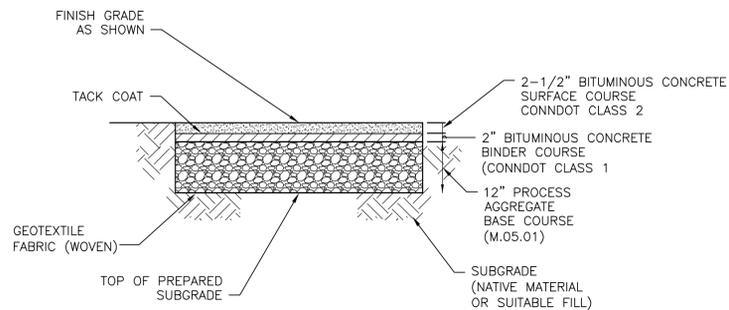
**AECOM** 500 ENTERPRISE DRIVE, SUITE 1A  
 ROCKY HILL, CT 06067  
 PHONE (860) 263-5800

in association with  
**BLACK & VEATCH**

**CONTRACT NO. 2015B-27**  
**SOUTH HARTFORD CONVEYANCE AND STORAGE TUNNEL**

**CONTRACT 2**  
**CTS-3 - STAGING, TEMPORARY SEDIMENTATION & EROSION CONTROL PLAN**  
 CIVIL

PLAN NUMBER	240 C-111
SHEET NO.	240 C-111

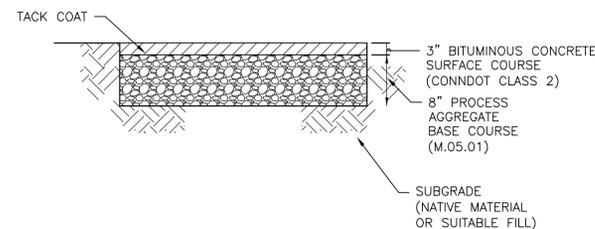


**NOTES:**

1. PROVIDE BITUMINOUS CONCRETE PAVEMENT TYPES PER CONNDOT STANDARD SPECIFICATIONS.

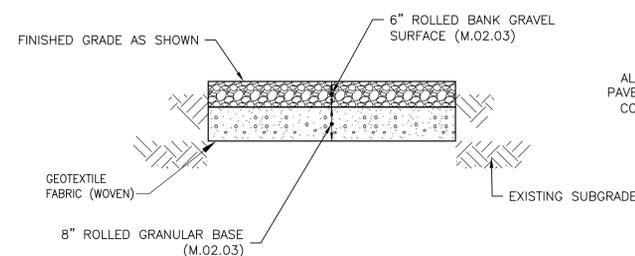
**BITUMINOUS CONCRETE PAVEMENT SECTION DETAIL**

NOT TO SCALE



**TEMPORARY BITUMINOUS CONCRETE PAVEMENT SECTION DETAIL**

NOT TO SCALE

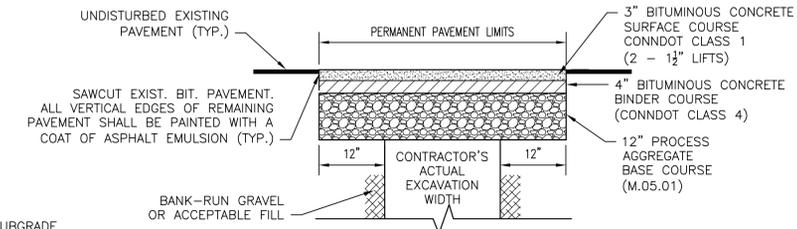


**NOTES:**

1. PROVIDE GRAVEL SHOULDER PER CONNDOT STANDARD SPECIFICATIONS.

**GRAVEL SHOULDER DETAIL**

NOT TO SCALE



**TALCOTT ROAD PAVEMENT RESTORATION DETAIL**

NOT TO SCALE

**NOTES:**

ALL PAVEMENT AND BASE DEPTHS SHOWN SHALL BE CONSIDERED THE MINIMUM REQUIRED. IF THE EXISTING PAVEMENT DEPTH IS GREATER THAN THAT REFLECTED IN THESE DETAILS THEN IT SHALL BE MATCHED.

DETAILS SHOWN APPLY PRIOR TO MILLING AND OVERLAY

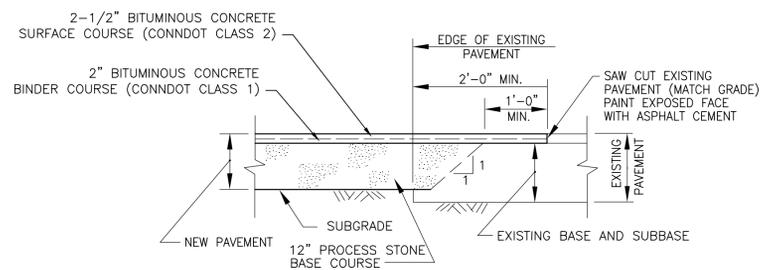
ALL PAVEMENT SHALL BE SAWCUT, ALL EDGES OF TRENCHES SHALL BE SEALED WITH APPROVED BITUMINOUS JOINT SEALER.

**MILLING**

A MILLING OPERATION (CURB-TO-CURB) WILL BE REQUIRED OVER ALL PAVEMENT REPAIR (SEE PLAN FOR LIMITS). THE PAVEMENT SURROUNDING AND INCLUDING THE EXCAVATION SHALL BE MILLED TO A DEPTH OF 2 INCHES FOR THE FULL WIDTH OF THE ROAD (CURB-TO-CURB). THE MILLED EDGES SHALL BE VERTICALLY FACED AND NOT TAPERED. THE ENTIRE MILLED AREAS, INCLUDING THE EDGES, SHALL BE SWEEPED AND TACK COATED WITH APPROVED MATERIAL AT THE APPROPRIATE RATE.

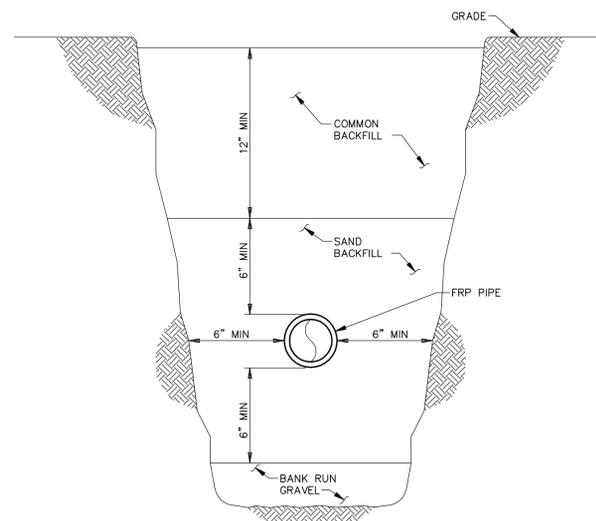
**OVERLAY**

THE MILLED AREA WILL BE OVERLAID WITH CLASS 1 BITUMINOUS CONCRETE, COMPACTED WITH A STEEL-DRUM ROLLER OF AT LEAST 10 TONS TO A THICKNESS OF 2 INCHES. THE SURFACE OF THE NEW OVERLAY SHALL BE FLUSH WITH THE ADJACENT EXISTING PAVEMENT. PAVEMENT JOINTS SHALL BE SEALED WITH AN APPROVED ASPHALTIC MATERIAL.



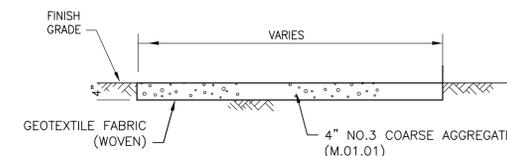
**TYPICAL FORMAT OF PAVEMENT MATCHING DETAIL**

NOT TO SCALE



**TRENCH DETAIL FOR FRP PIPE INSTALLATION**

NOT TO SCALE



**4\"/>**

NOT TO SCALE

**NOTES:**

1. FOR LEGEND SEE SHEET 200 C-001.
2. FOR GENERAL NOTES AND ABBREVIATIONS SEE SHEET 200 C-002.

VERTICAL DATUM IS NGVD 29  
HORIZONTAL DATUM IS NAD 83/92

**MDC**  
The Metropolitan District  
555 Main Street  
Hartford, Connecticut

REV. NO.	DATE	DRWN	CHKD	REMARKS

FILE NAME: 299\_C-101  
DESIGNED BY: S. GANESH  
DRAWN BY: M. THIBODEAU  
CHK'D BY: R. BERLANDY  
X-CHK'D BY: J. SULLIVAN  
APPROVED BY: J. SULLIVAN  
DATE: MAY 2015

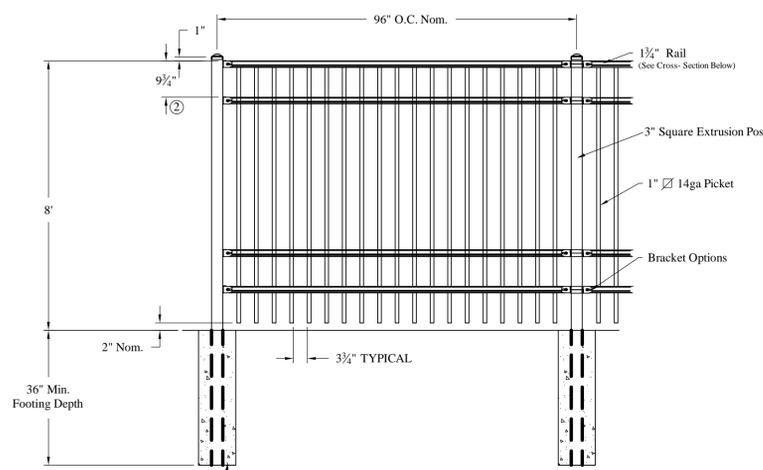
**AECOM** 500 ENTERPRISE DRIVE, SUITE 1A  
ROCKY HILL, CT 06067  
PHONE (860) 263-5800

in association with  
**BLACK & VEATCH**

CONTRACT NO. 2015B-27  
SOUTH HARTFORD CONVEYANCE AND STORAGE TUNNEL

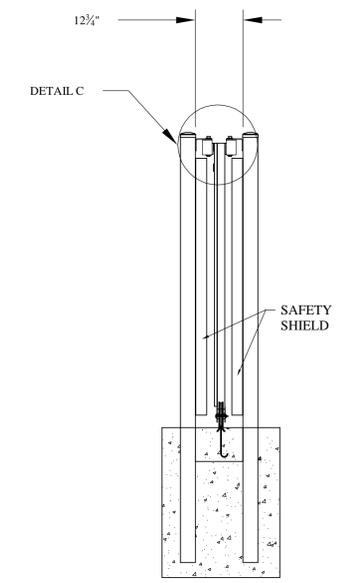
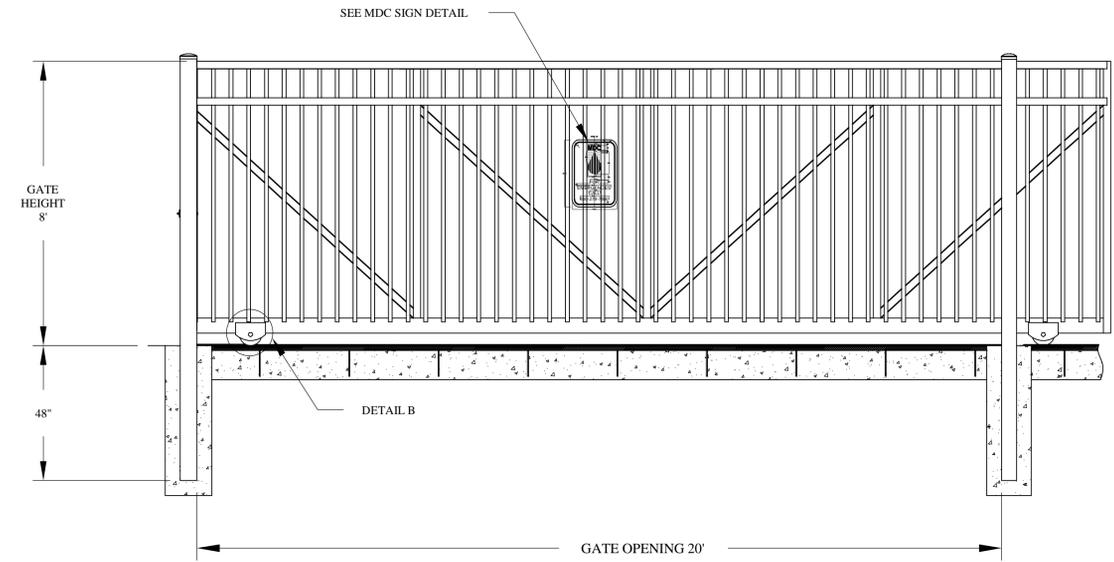
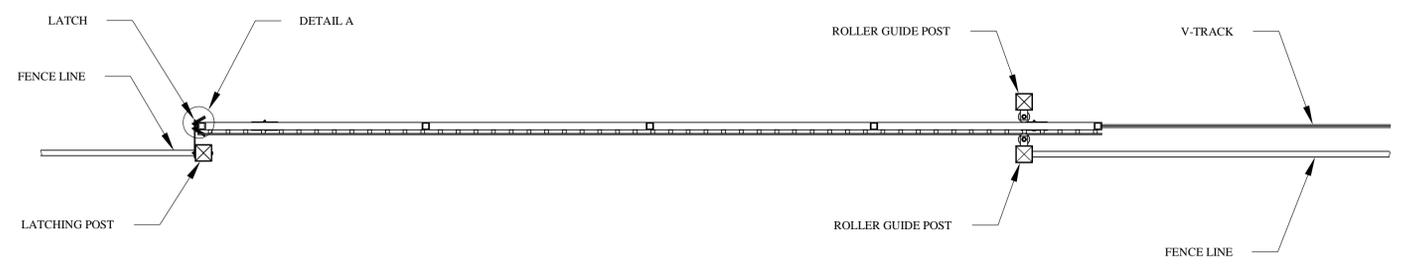
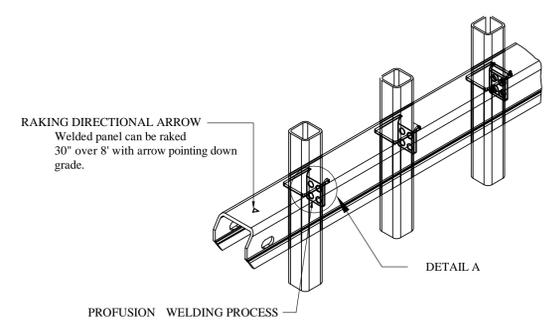
CONTRACT 2  
CIVIL DETAIL SHEET I  
CIVIL

PLAN NUMBER  
SHEET NO.  
299 C-101

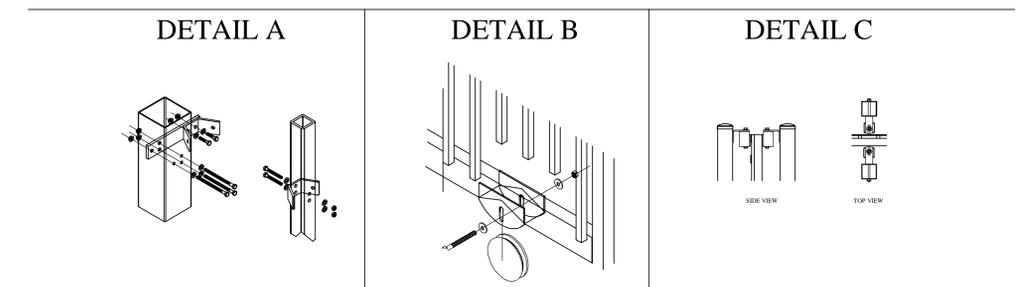
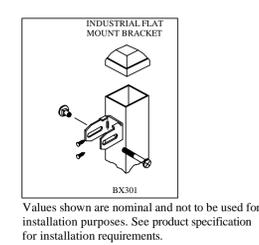
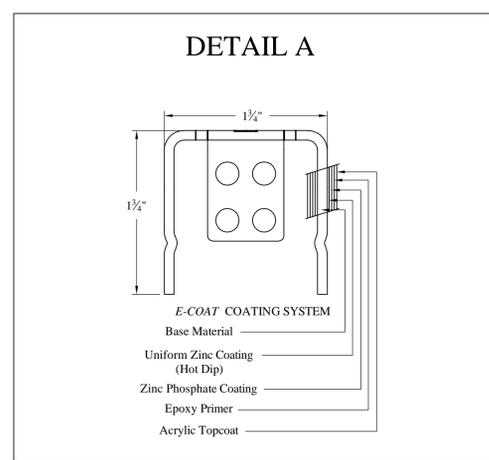


ALL POSTS TYPICALLY INSTALLED IN CONCRETE IN ACCORDANCE WITH LOCAL CONDITIONS AND STANDARD BUILDING PRACTICES

**8' HIGH INDUSTRIAL STEEL FENCE DETAIL**  
NOT TO SCALE



**8' HORIZONTAL STEEL SLIDING GATE DETAIL**  
NOT TO SCALE



- NOTES:**
1. FOR LEGEND SEE SHEET 200 C-001.
  2. FOR GENERAL NOTES AND ABBREVIATIONS SEE SHEET 200 C-002.
  3. FOR SPECIFICATION SEE SPEC 02443

VERTICAL DATUM IS NGVD 29  
HORIZONTAL DATUM IS NAD 83/92

**The Metropolitan District**  
555 Main Street  
Hartford, Connecticut

REV. NO.	DATE	DRWN	CHKD	REMARKS

FILE NAME: 299\_C-103  
DESIGNED BY: S. GANESH  
DRAWN BY: M. THIBODEAU  
CHK'D BY: R. BERLANDY  
X-CHK'D BY: J. SULLIVAN  
APPROVED BY: J. SULLIVAN  
DATE: MAY 2015

500 ENTERPRISE DRIVE, SUITE 1A  
ROCKY HILL, CT 06067  
PHONE (860) 263-5800

in association with  
 **BLACK & VEATCH**

**CONTRACT NO. 2015B-27**  
**SOUTH HARTFORD CONVEYANCE AND STORAGE TUNNEL**

**CONTRACT 2**

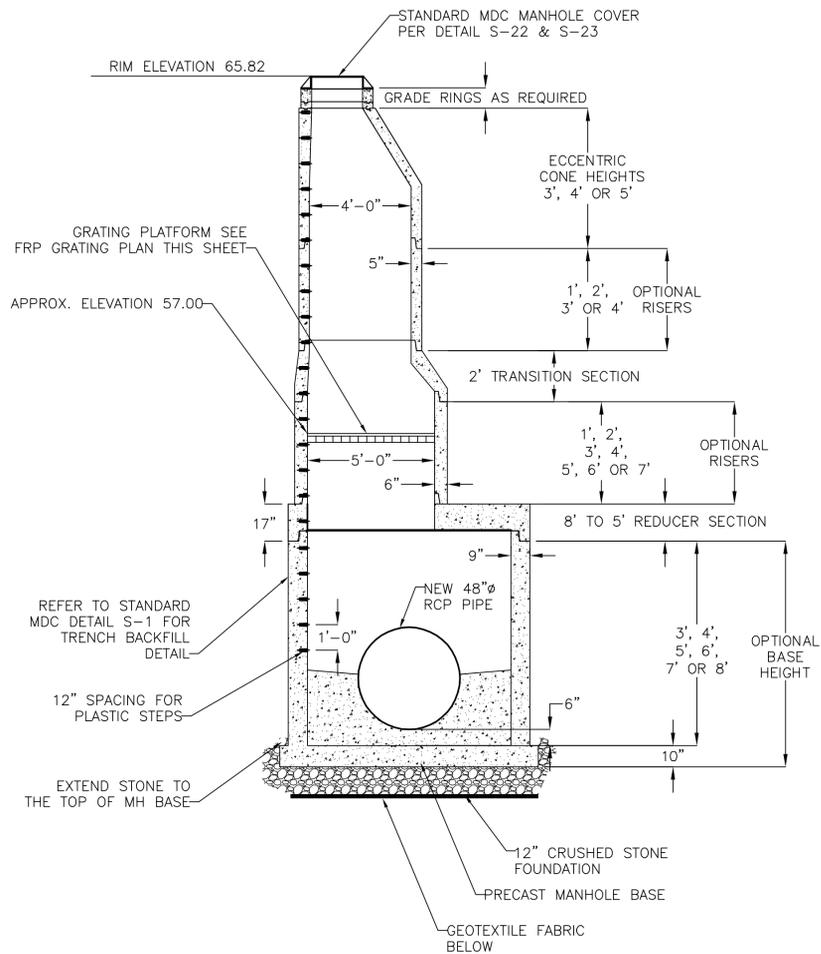
**CIVIL DETAIL SHEET III**

CIVIL

PLAN NUMBER

SHEET NO.

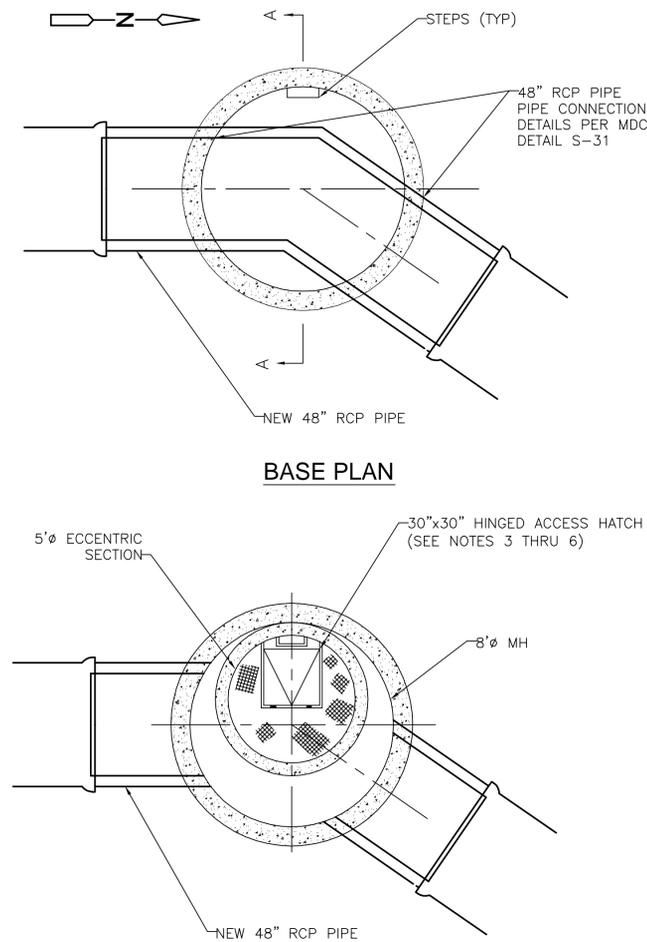
**299 C-103**



SECTION A-A

WHCP MH-2 8' DIAMETER PRECAST MANHOLE DETAIL

NOT TO SCALE

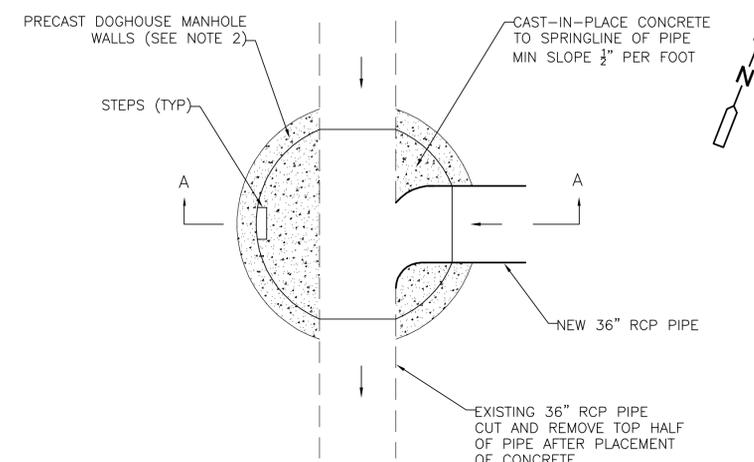


BASE PLAN

PLAN AT GRATING PLATFORM

NOTES:

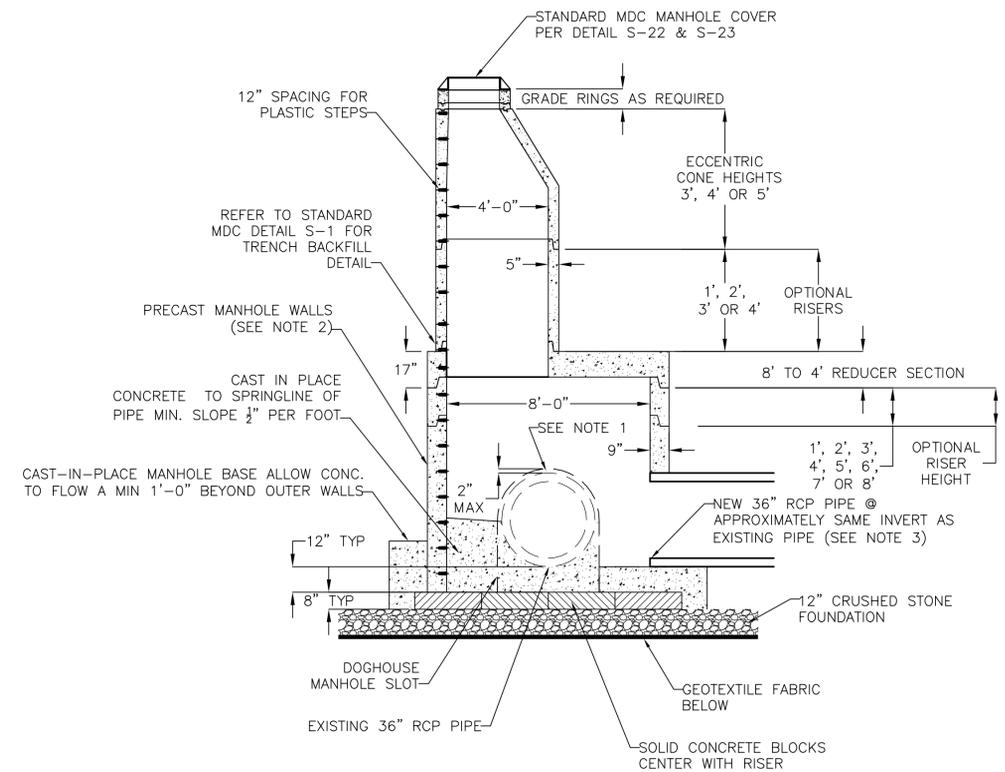
1. INVERTS SHALL BE FIELD FORMED AND NOT FORMED IN SHOP/YARD
2. DISTANCE BETWEEN TOP OF MANHOLE COVER TO FIRST PLASTIC STEP SHALL BE BETWEEN 12" AND 16"
3. GRATING ANGLES AND ALL APPURTENANCES ARE TO BE MANUFACTURERS STANDARD DESIGN DETAILS
4. STRUCTURAL DESIGN TO BE PERFORMED BY FRP GRATING MANUFACTURER AND BE SIGNED AND STAMPED BY A CONNECTICUT PROFESSIONAL ENGINEER
5. DESIGN LOAD: 100 LB/SF WITH MAX. DEFLECTION LIMITED TO 0.125 INCH.



PLAN

NOTES:

1. FILL ANNULAR SPACE AROUND PIPE WITH NON-SHRINK GROUT.
2. DOGHOUSE MANHOLE SLOT SIZE BASED ON EXISTING PIPE SIZE, CONTRACTOR SHALL CONFIRM PIPE SIZE, ANGLES AND CONFIGURATION PRIOR TO CONSTRUCTION
3. NEW PIPE CONNECTION TO DOGHOUSE MANHOLE PER MDC STANDARD DETAIL S-31.
4. EXISTING PIPE TO REMAIN IN SERVICE, CONSTRUCT NEW INVERT AND TRANSFER FLOWS AS REQUIRED.
5. CAST-IN PLACE DOGHOUSE MANHOLE SHALL BE INSTALLED ONLY WHEN AUTHORIZED BY ENGINEER.
6. DISTANCE BETWEEN TOP OF MANHOLE COVER TO FIRST PLASTIC STEP SHALL BE BETWEEN 12" AND 16"



SECTION A-A

WHCP MH-1 8' DIAMETER DOGHOUSE MANHOLE DETAIL

NOT TO SCALE

REV. NO.	DATE	DRWN	CHKD	REMARKS

FILE NAME: 299_C-104
DESIGNED BY: S. GANESH
DRAWN BY: M. THIBODEAU
CHK'D BY: R. BERLANDY
X-CHK'D BY: J. SULLIVAN
APPROVED BY: J. SULLIVAN
DATE: MAY 2015



500 ENTERPRISE DRIVE, SUITE 1A  
ROCKY HILL, CT 06067  
PHONE (860) 263-5800

in association with  
**BLACK & VEATCH**

CONTRACT NO. 2015B-27  
SOUTH HARTFORD CONVEYANCE AND  
STORAGE TUNNEL

CONTRACT 2

CIVIL DETAIL SHEET IV

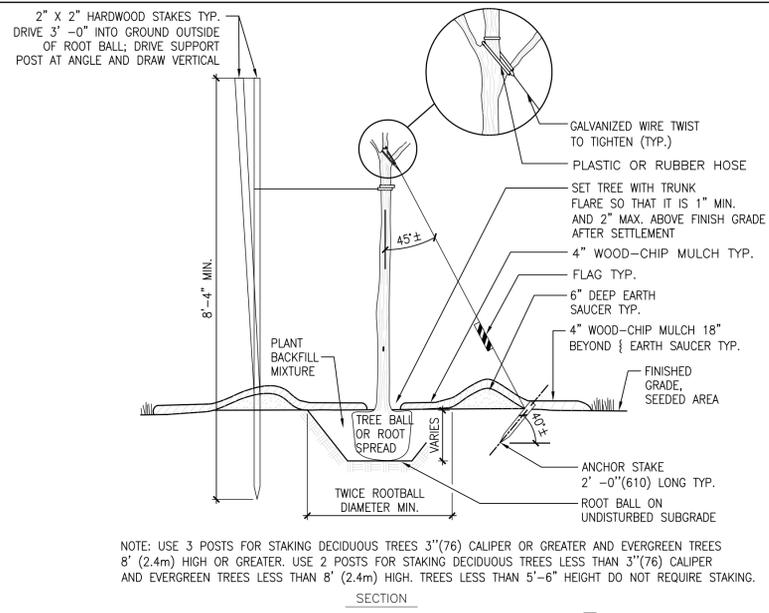
CIVIL

VERTICAL DATUM IS NGVD 29  
HORIZONTAL DATUM IS NAD 83/92

PLAN NUMBER

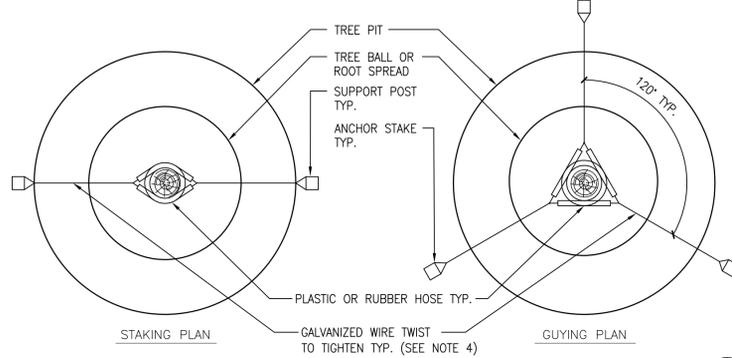
SHEET NO.

299 C-104

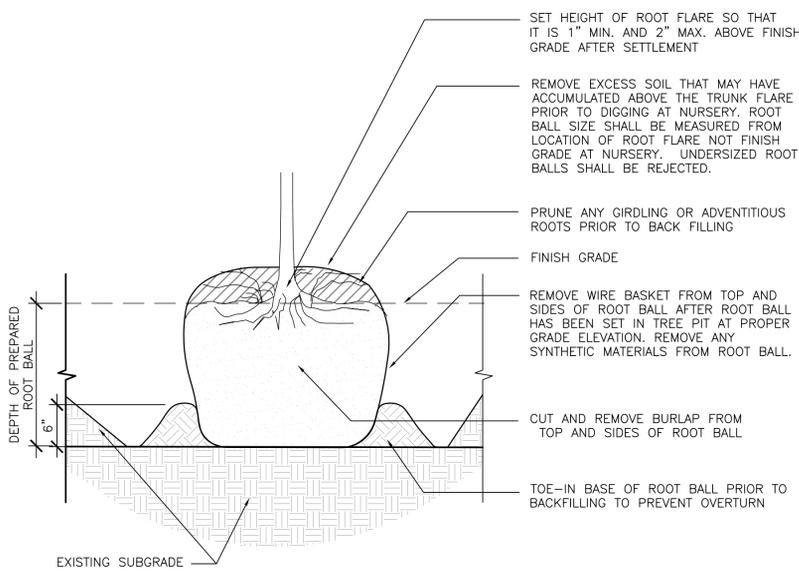


NOTE: USE 3 POSTS FOR STAKING DECIDUOUS TREES 3\"/>

SECTION

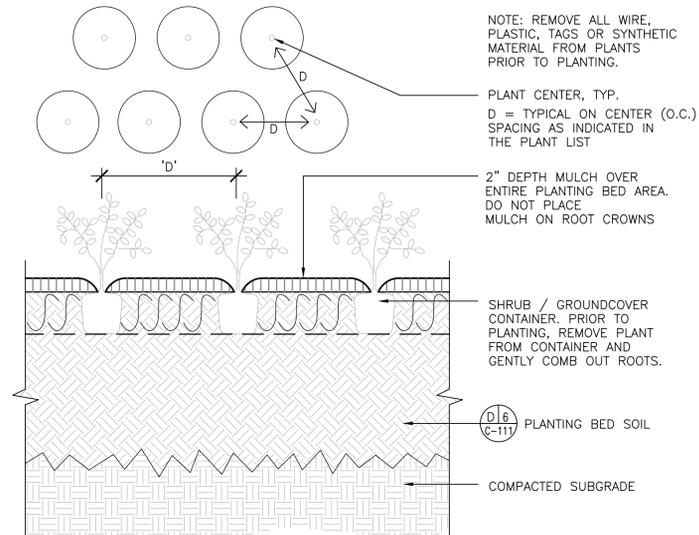


DECIDUOUS AND EVERGREEN TREE PLANTING, STAKING AND GUYING (D 1 C-111)

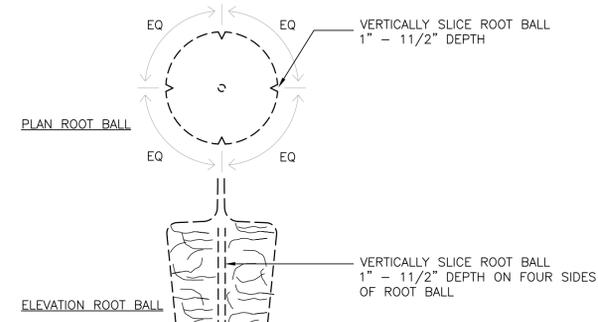


NOTE:  
 1. IF GROUNDWATER IS DISCOVERED IN PLANTING HOLE, CEASE OPERATION AND FOLLOW INSTRUCTIONS FROM ENGINEER AND/OR RESTORATION SPECIALIST.  
 2. EXPOSE TRUNK FLARE IN BALL PRIOR TO DIGGING HOLE TO DETERMINE CORRECT DEPTH.

ROOT BALL PREPARATION FOR B&B ROOT BALL (D 2 C-111)

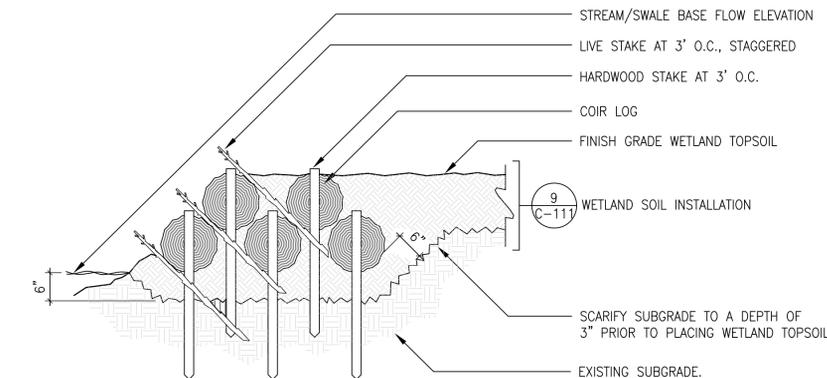


SHRUB PLANTING IN BEDS (D 3 C-111)

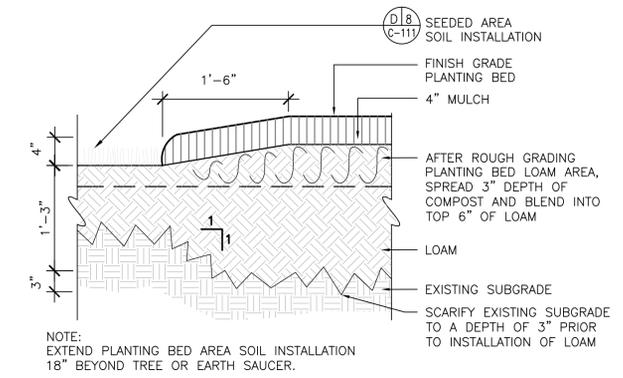


NOTE:  
 THIS DETAIL APPLIES TO CONTAINERIZED TREES, SHRUBS, AND PERENNIALS, BUT NOT TO HERBACEOUS PLUGS.

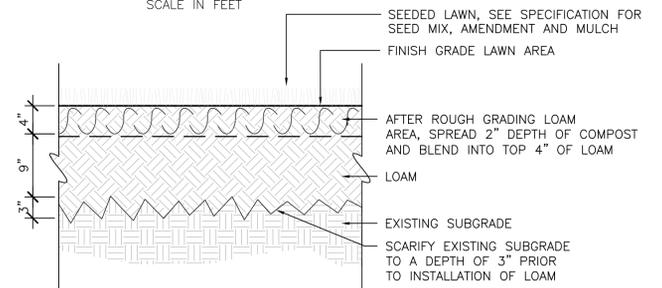
ROOT BALL PREPARATION FOR CONTAINERIZED ROOT BALL (D 4 C-111)



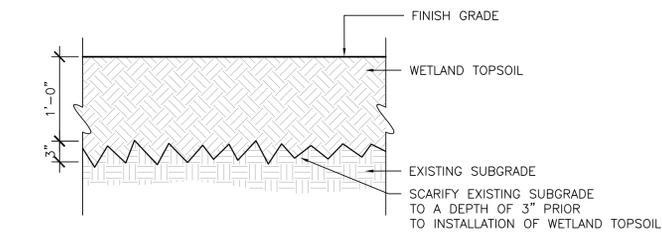
COIR LOG AND LIVE STAKING (D 5 C-111)



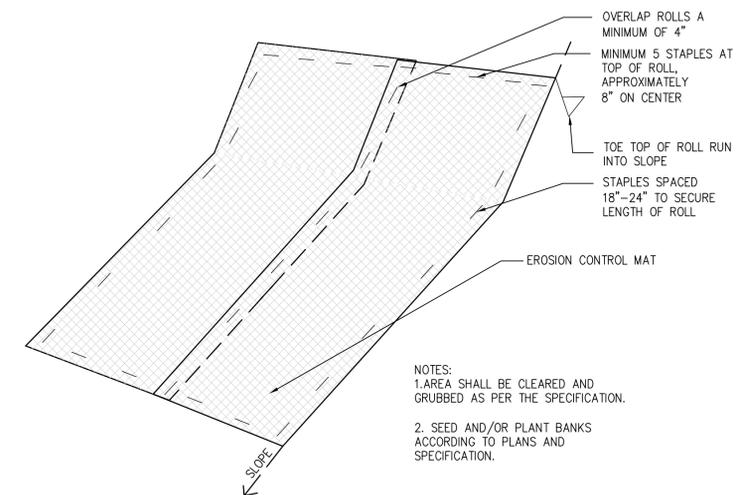
PLANTING BED SOIL INSTALLATION (D 6 C-111)



SEEDED AREA SOIL INSTALLATION (D 7 C-111)



WETLAND SOIL INSTALLATION (D 8 C-111)



EROSION MAT INSTALLATION (D 9 C-111)



NOTES:  
 1. AREA SHALL BE CLEARED AND GRUBBED AS PER THE SPECIFICATION.  
 2. SEED AND/OR PLANT BANKS ACCORDING TO PLANS AND SPECIFICATION.

VERTICAL DATUM IS NGVD 29  
 HORIZONTAL DATUM IS NAD 83/92

PLOTTED\_DATE  
 SAVED\_DATE  
 C:\NET\_ID

**MDC**  
**The Metropolitan District**  
 555 Main Street  
 Hartford, Connecticut

REV. NO.	DATE	DRWN	CHKD	REMARKS

FILE NAME: 299 C-111  
 DESIGNED BY: A.LAVALLEE  
 DRAWN BY: H.BEALL  
 CHK'D BY: T.A.T.  
 X-CHK'D BY: J. SULLIVAN  
 APPROVED BY: J. SULLIVAN  
 DATE: 2014

90% SUBMITTAL  
 NOT FOR  
 CONSTRUCTION

**AECOM** 500 ENTERPRISE DRIVE, SUITE 1A  
 ROCKY HILL, CT 06067  
 PHONE (860) 263-5800

in association with  
**BLACK & VEATCH**

CERTIFICATE OF AUTHORIZATION NO. XXXXXXXXXX  
 CONTRACT NO. 20XX-XX  
 SOUTH HARTFORD CONVEYANCE AND  
 STORAGE TUNNEL

LANDSCAPING DETAILS 1

PLAN NUMBER

SHEET NO.

299 C-111

PEM-1

BOTANICAL NAME	COMMON NAME	INDICATOR	SIZE	SPACING	LOCATION
					<b>WETLAND Z</b>
<b>AREA (S.F.)</b>					32,301
<b>Emergent</b>					<b>QUANTITY</b>
<i>Sparganium americanum</i>	Bur-reed	FAC	12" Ht Container	3' O.C.	719
<i>Scirpus validus</i>	Bulrush	FACW	12" Ht Container	3' O.C.	719
<i>Carex stricta</i>	Tussock Sedge	FACW	12" Ht Container	3' O.C.	719
<i>Peltandra virginica</i>	Arrow Arum	FACW	12" Ht Container	3' O.C.	719
<i>Salix discolor</i>	Pussy Willow	FACW	1-2" Diameter Live Stake	3' O.C.	719
TOTAL QTY=					3,595

PEM-2

BOTANICAL NAME	COMMON NAME	INDICATOR	SIZE	SPACING	LOCATION
					<b>North PFO &amp; PSS</b>
<b>AREA (S.F.)</b>					8,654
<b>Emergent</b>					<b>QUANTITY</b>
<i>Scirpus cyperinus</i>	Wool grass	FACW	12" Ht Container	3' O.C.	322
<i>Juncus effusus</i>	Soft Rush	FACW	12" Ht Container	3' O.C.	322
<i>Juncus canadensis</i>	Canada Rush	FACW	12" Ht Container	3' O.C.	322
TOTAL QTY=					966

UPLAND BUFFER

BOTANICAL NAME	COMMON NAME	INDICATOR	SIZE	SPACING	LOCATION
					<b>Upland Buffer</b>
<b>AREA (S.F.)</b>					10,373
<b>TREES</b>					<b>Quantity</b>
<i>JUNIPERUS VIRGINIANA</i>	EASTERN RED CEDAR	FACU	3'-4' HT B.B.	10' O.C.	27
<i>BETULA POPULIFOLIA</i>	GRAY BIRCH	FAC	18" - 24" HT B.B.	10' O.C.	27
<i>PRUNUS SEROTINA</i>	BLACK CHERRY	FACU	24"-36" HT B.B.	10' O.C.	28
TOTAL QUANTITY=					82
<b>SHRUBS</b>					<b>Quantity</b>
<i>RHUS GLABRA</i>	SMOOTH SUMAC	—	18" - 24" HT B.B.	5' O.C.	95
<i>VIBURNUM LENTAGO</i>	NANNYBERRY	—	18" - 24" HT B.B.	5' O.C.	95
<i>MYRICA PENNSYLVANICA</i>	NORTHERN BAYBERRY	FAC	18" - 24" HT B.B.	5' O.C.	95
<i>VIBURNUM DENTATUM</i>	ARROWWOOD	FACW	2'-3' HT B.B.	5' O.C.	95
TOTAL QUANTITY=					380

PLANT LIST FOR WETLAND RESTORATION AREA 1  
C-112

SYMB	QTY	BOTANICAL NAME	COMMON NAME	ROOT	SIZE	COMMENTS
<b>TREES</b>						
LT	6	LIRIODENDRON TULIPIFERA	TULIP TREE	B&B	2 1/2"-3" CAL.	
PSF	16	PINUS STROBIS 'FASTIGIATA'	FASTIGIATE WHITE PINE	B&B	5'-6" HT.	FULL TO GROUND
<b>SHRUBS</b>						
CSI	92	CORNUS SERICEA 'ISANTI'	ISANTI DOGWOOD	#5 CONT.	24"-30" HT.	SPACE AT 5' O.C.
FI	103	FORSYTHIA X INTERMEDIA 'GOLD TIDE'	GOLD TIDE FORSYTHIA	#3 CONT.	15"-18" HT.	SPACE AT 2'-6" O.C.
VTS	10	VIBURNUM PLICATUM T. 'SHASTA'	SHASTA VIBURNUM	B&B	3'-4" HT.	FULL TO GROUND

PLANT LIST FOR RETRIEVAL SHAFT SITE 2  
C-112

NOTES:

- SEE DRAWING 220 C-116 FOR WETLAND Z MITIGATION PLAN.
- SEE DRAWING 230 C-141 FOR RETRIEVAL SHAFT FINAL SITE LANDSCAPE PLAN.
- SEE DRAWING 299 C-111 FOR LANDSCAPING DETAILS 1.

VERTICAL DATUM IS NGVD 29  
HORIZONTAL DATUM IS NAD 83/92

PLOTTED\_DATE  
SAVED\_DATE  
CYGNET\_ID



**The Metropolitan District**  
555 Main Street  
Hartford, Connecticut

REV. NO.	DATE	DRWN	CHKD	REMARKS

FILE NAME: 299 C-112  
DESIGNED BY: A.LAVALLEE  
DRAWN BY: H.BEALL  
CHK'D BY: T.A.T.  
X-CHK'D BY:  
APPROVED BY: J. SULLIVAN  
DATE: 2014

90% SUBMITTAL  
NOT FOR  
CONSTRUCTION



500 ENTERPRISE DRIVE, SUITE 1A  
ROCKY HILL, CT 06067  
PHONE (860) 263-5800

in association with  
 **BLACK & VEATCH**

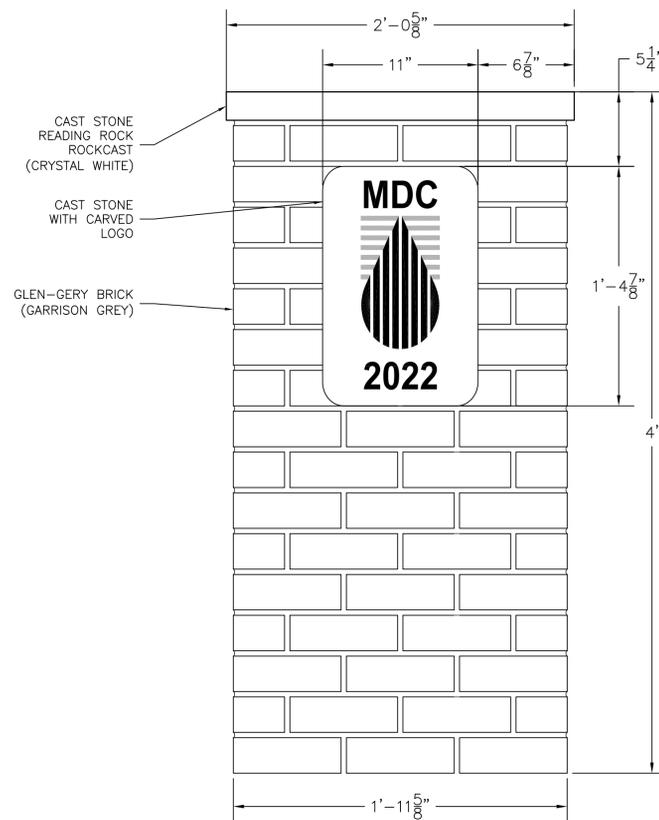
CERTIFICATE OF AUTHORIZATION NO. XXXXXXXXXX  
CONTRACT NO. 20XX-XX  
SOUTH HARTFORD CONVEYANCE AND  
STORAGE TUNNEL

PLANT LIST AND PLANTING NOTES

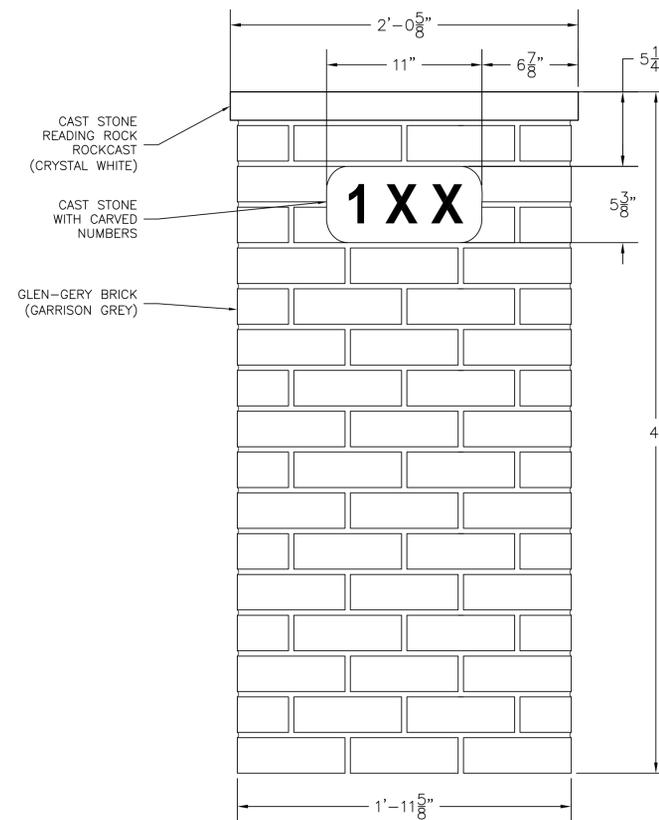
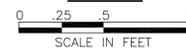
PLAN NUMBER

SHEET NO.

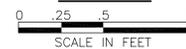
299 C-112



**LEFT**



**RIGHT**



VERTICAL DATUM IS NGVD 29  
HORIZONTAL DATUM IS NAD 83/92

**MDC**  
**The Metropolitan District**  
555 Main Street  
Hartford, Connecticut

REV. NO.	DATE	DRWN	CHKD	REMARKS

FILE NAME: 220 C-116  
DESIGNED BY: A. LAVALLEE  
DRAWN BY: H. BEALL  
CHK'D BY: V. AYMER  
X-CHK'D BY: B. CANTERBURY  
APPROVED BY: J. SULLIVAN  
DATE: MAY 2015

5/29/15



500 ENTERPRISE DRIVE, SUITE 1A  
ROCKY HILL, CT 06067  
PHONE (860) 263-5800

in association with  
**BLACK & VEATCH**

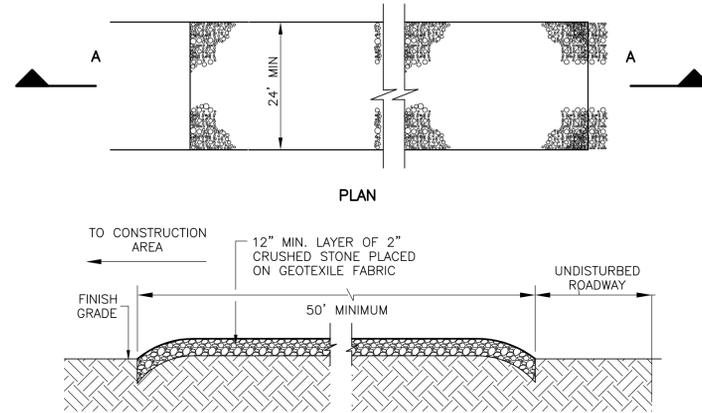
**CONTRACT NO. 2015B-27**  
**SOUTH HARTFORD CONVEYANCE AND STORAGE TUNNEL**

CONTRACT 2  
**STONE PILLARS**  
LANDSCAPE

PLAN NUMBER

SHEET NO.

299 C-113

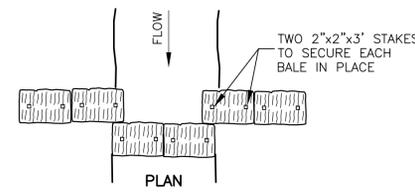


**NOTES:**

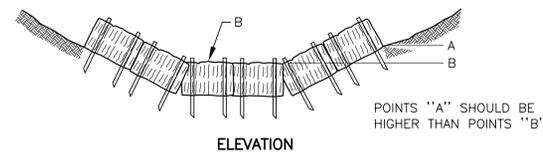
1. PROVIDE SMOOTH, CONTINUOUS TRANSITION BETWEEN STABILIZED CONSTRUCTION ENTRANCE AND UNDISTURBED ROADWAY.
2. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO UNDISTURBED ROADWAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE OR ADDING STONE TO THE LENGTH OF THE ENTRANCE.
3. REPAIR AND CLEANOUT ANY MEASURES USED TO TRAP SEDIMENT.
4. ALL SEDIMENT SPILLED, DROPPED, WASHED, OR TRACKED ONTO UNDISTURBED ROADWAY MUST BE REMOVED IMMEDIATELY.

**STABILIZED CONSTRUCTION ENTRANCE**

DETAIL **ES**  
NTS 1



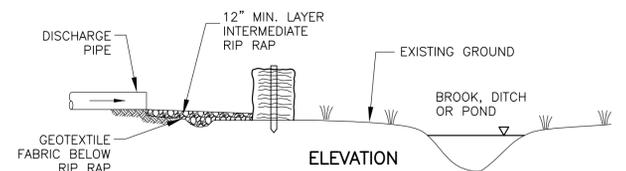
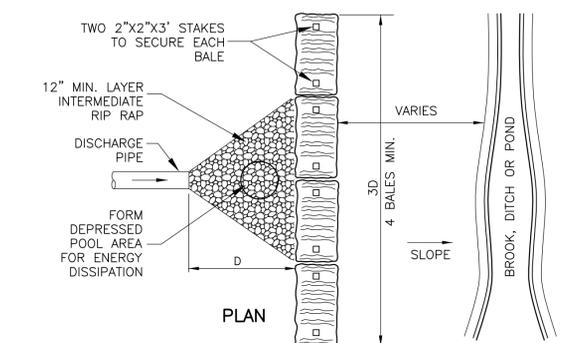
TO BE INSTALLED AT DRAINAGE DITCH



POINTS "A" SHOULD BE HIGHER THAN POINTS "B"

**HAY BALE SEDIMENTATION CHECK**

DETAIL **ES**  
NTS 2

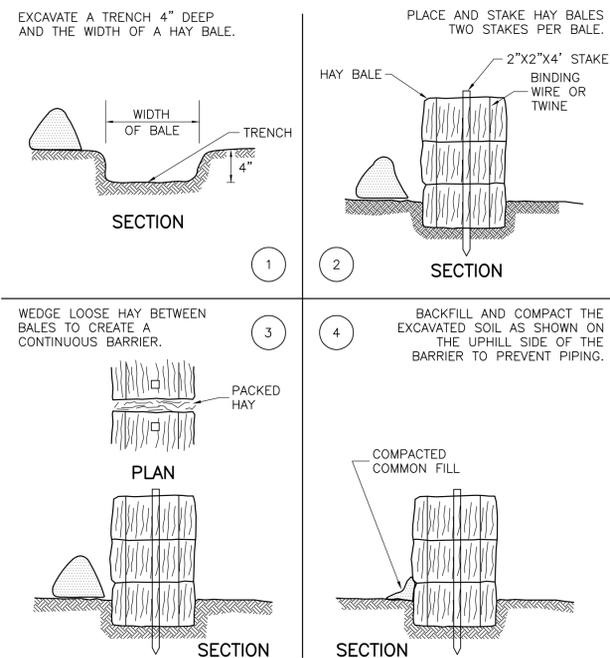


**NOTES:**

1. TO BE USED WHERE A DEWATERING DISCHARGE LINE IS LOCATED AS SHOWN ON THE DRAWINGS OR AS DIRECTED BY THE ENGINEER. DESIGN OF RIP RAP AREA MUST BE CERTIFIED BY A CT REGISTERED PROFESSIONAL ENGINEER.
2. HOOK END BALES TO KEEP SEDIMENT FROM MIGRATING AROUND ENDS.

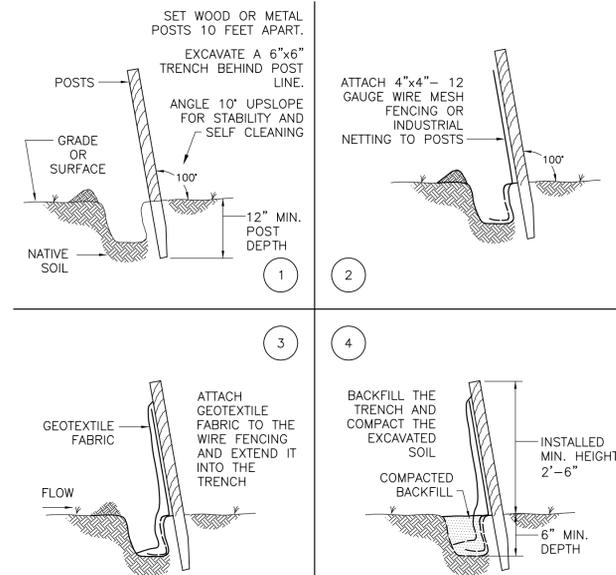
**HAY BALE EROSION DAM**

DETAIL **ES**  
NTS 3



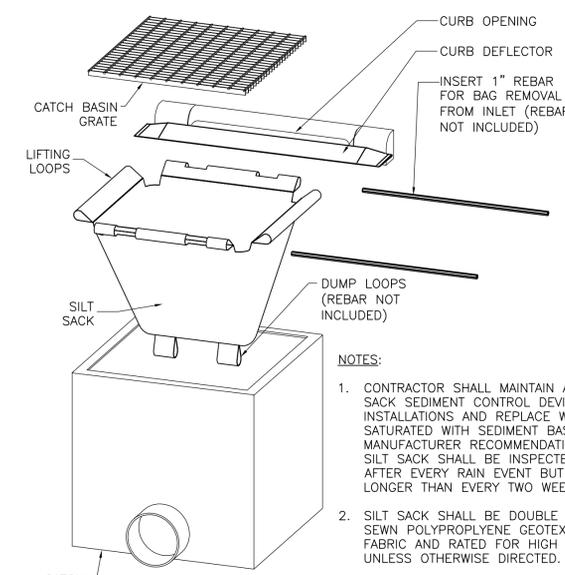
**HAY BALE BARRIER INSTALLATION**

DETAIL **ES**  
NTS 4



**SILT FENCE INSTALLATION**

DETAIL **ES**  
NTS 5



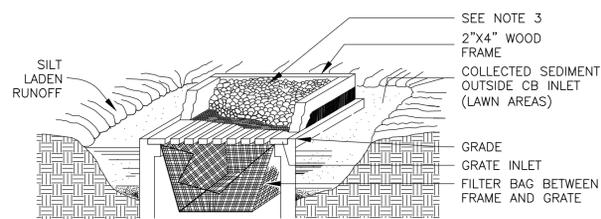
**CATCH BASIN SILT SACK**

DETAIL **ES**  
NTS 6

**NOTES:**

1. CONTRACTOR SHALL MAINTAIN ALL SILT SACK SEDIMENT CONTROL DEVICE INSTALLATIONS AND REPLACE WHEN SATURATED WITH SEDIMENT BASED ON MANUFACTURER RECOMMENDATIONS. SILT SACK SHALL BE INSPECTED AFTER EVERY RAIN EVENT BUT NO LONGER THAN EVERY TWO WEEKS.
2. SILT SACK SHALL BE DOUBLE NEEDLE SEWN POLYPROPYLENE GEOTEXTILE FABRIC AND RATED FOR HIGH FLOW UNLESS OTHERWISE DIRECTED.
3. CONTRACTOR SHALL PROVIDE CURB OPENING DEFLECTOR AT ALL CATCH BASINS AS NECESSARY.

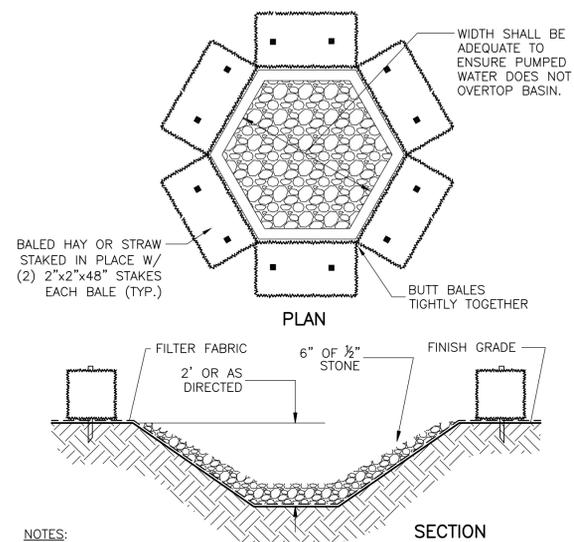
REV. NO.	DATE	DRWN	CHKD	REMARKS



**NOTES:**

1. IN LAWN AREAS; USE MESH, WOOD FRAME BOX, AND STONE FOR INLET PROTECTION (NO BAG REQUIRED)
2. IN PAVED AREAS, USE FILTER BAG FOR INLET PROTECTION (NO MESH, BOX STONE REQUIRED)
3. WRAP 1/4" WIRE MESH AROUND SIDES OF BOX AND ATTACH TO FRAME. FILL WITH 1/2"-1" DIAMETER WASHED STONE. REPLACE WHEN SATURATED WITH SEDIMENT.

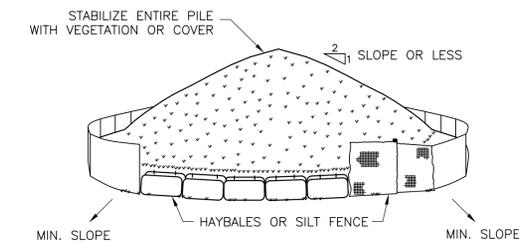
CATCH BASIN FILTER  
 DETAIL ES  
 NTS 7



**NOTES:**

1. FURNISH THE SERVICES OF A LICENSED PROFESSIONAL ENGINEER (P.E.) REGISTERED IN THE STATE OF CONNECTICUT, TO PREPARE DEWATERING AND DRAINAGE SYSTEM DESIGNS AND SUBMITTALS.
2. BASIN DIMENSIONS AND MATERIAL SPECIFICATIONS ARE SITE SPECIFIC FOR USE IN WORK WITHIN THE WETLAND. AFTER DEWATERING ACTIVITIES ARE COMPLETE, CONTRACTOR SHALL REMOVE AND RESTORE AREA WITH TOPSOIL AND SEED. LOCATION TO BE APPROVED BY ENGINEER.

DEWATERING BASIN  
 DETAIL ES  
 NTS 8

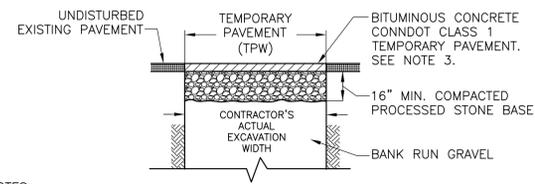


**NOTES:**

1. AREA CHOSEN FOR STOCKPILING OPERATIONS SHALL BE DRY AND STABLE.
2. MAXIMUM SLOPE OF STOCKPILE SHALL BE 2:1.
3. EACH PILE SHALL BE SURROUNDED WITH EITHER SILT FENCING OR HAYBALES, THEN STABILIZED WITH VEGETATION OR COVERED.
4. UPON COMPLETION OF SOIL STOCKPILING, RESTORE STOCKPILING AREA TO EXISTING CONDITIONS PRIOR TO CONSTRUCTION.

STOCKPILING AREA  
 DETAIL ES  
 NTS 9

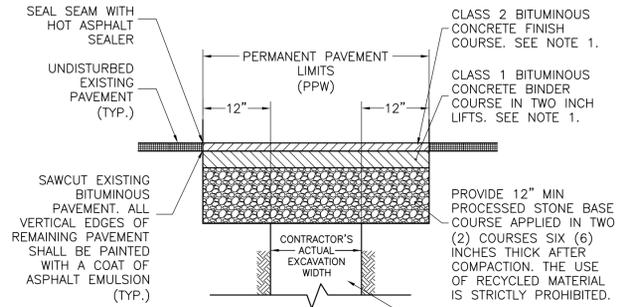
REV. NO.	DATE	DRWN	CHKD	REMARKS



- NOTES:**
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL EMERGENCY AND GENERAL MAINTENANCE OF TEMPORARY TRENCH PAVEMENT.
  - TEMPORARY TRENCH REPAIR SHALL BE COMPLETED AT THE END OF EACH WORK DAY.
  - MINIMUM THICKNESS FOR TEMPORARY PAVEMENT SHALL BE THICKNESS AS STATED IN THE SPECIFICATIONS. IF THE THICKNESS OF PAVEMENT ORDERED AND PLACED IS GREATER THAN SPECIFIED, PAYMENT SHALL BE PRORATED ON THE BASIS OF THE THICKNESS OF THE MATERIAL ACTUALLY ORDERED AND PLACED.
  - THE PAYLINE DIMENSIONS SHOWN REPRESENT THE MAXIMUM PAYLINE LIMITS TO BE PAID. WHEN THE ACTUAL SURFACE REPAIR OR TRENCH WIDTH IS LESS, THE ACTUAL WIDTH SHALL BE PAID FOR AT THE APPLICABLE UNIT PRICE.
  - THE MAXIMUM TEMPORARY PAVEMENT PAY WIDTH AT MANHOLES IS 12" OUTSIDE THE BASE.

DEPTH TO PIPE INVERT	0-12" PIPE TPW (FT)	>12" PIPE TPW (FT)
0-8	5.0	PIPE I.D. + 4
8-12	7.0	PIPE I.D. + 6
12-16	8.0	PIPE I.D. + 7
>16	9.0	PIPE I.D. + 8

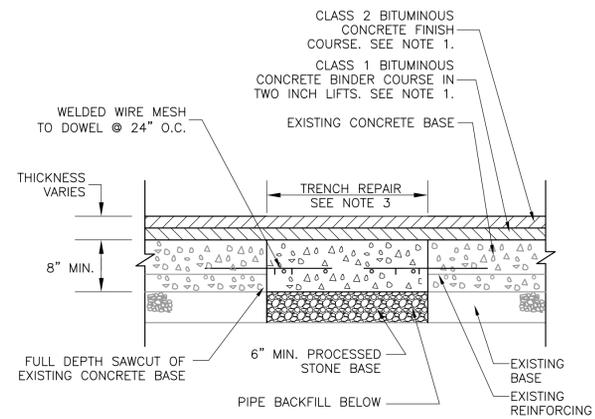
TEMPORARY TRENCH PAVEMENT REPAIR



- NOTES:**
- MINIMUM THICKNESS FOR PERMANENT FINISH AND BINDER COURSES SHALL BE THICKNESS AS STATED IN THE SPECIFICATIONS.
  - THE PAYLINE DIMENSIONS SHOWN REPRESENT THE MAXIMUM PAYLINE LIMITS TO BE PAID. WHEN THE ACTUAL SURFACE REPAIR OR TRENCH WIDTH IS LESS, THE ACTUAL WIDTH SHALL BE PAID FOR AT THE APPLICABLE UNIT PRICE.
  - THE MAXIMUM PERMANENT PAVEMENT PAY WIDTH AT MANHOLES IS 24" OUTSIDE THE BASE.

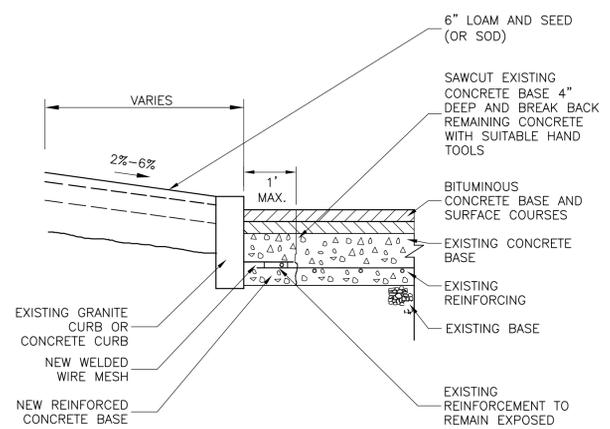
DEPTH TO PIPE INVERT	0-12" PIPE PPW (FT)	>12" PIPE PPW (FT)
0-8	7.0	PIPE I.D. + 6
8-12	9.0	PIPE I.D. + 8
12-16	10.0	PIPE I.D. + 9
>16	11.0	PIPE I.D. + 10

PERMANENT TRENCH PAVEMENT RESTORATION

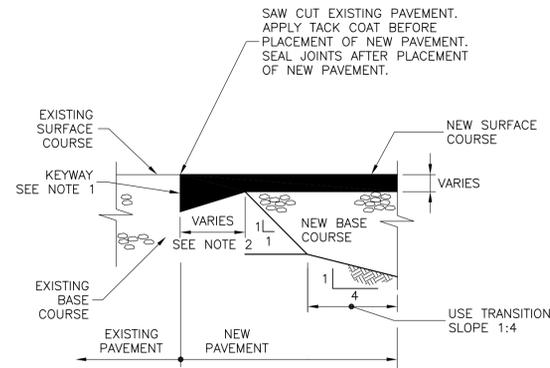
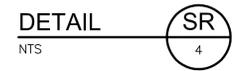


- NOTES:**
- MINIMUM THICKNESS FOR PERMANENT FINISH AND BINDER COURSES SHALL BE THICKNESS AS SPECIFIED.
  - PROVIDE 18" LONG SMOOTH DOWELS 5/8" @ 24" O.C. DRILL HOLE SHALL BE OVERSIZED BY 1/8".
  - SEE TEMPORARY TRENCH PAVEMENT REPAIR DETAIL FOR PAY WIDTHS.

REINFORCED CONCRETE BASE TRENCH REPAIR

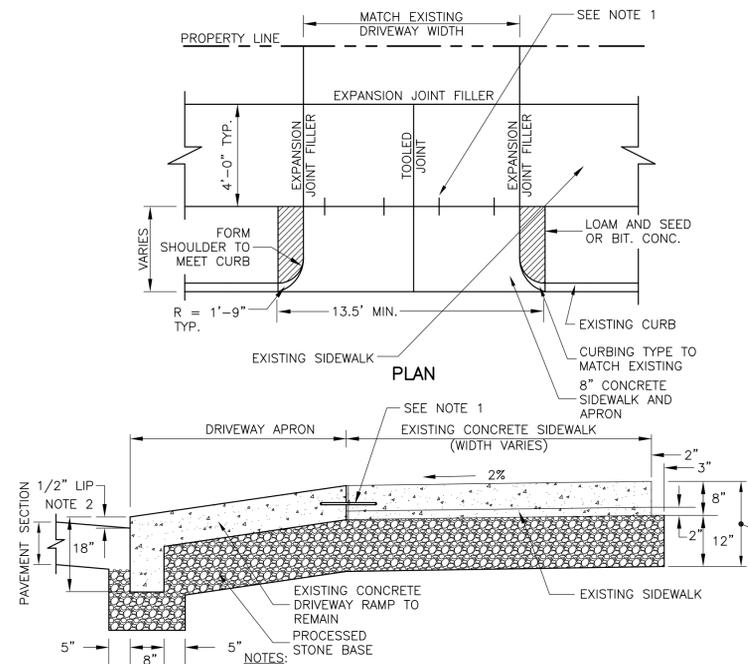


REINFORCED CONCRETE BASE REPAIR AT EXISTING CURB



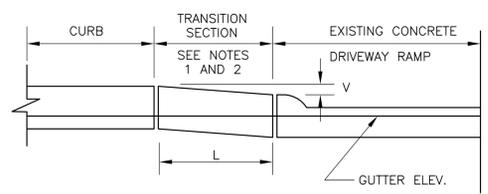
- NOTES:**
- KEYWAYS MUST BE MILLED INTO EXISTING PAVEMENT FOR FINAL PAVEMENT COURSE TO PROVIDE A TIGHT, SMOOTH JOINT. THE DEPTH OF THE KEYWAY BELOW THE FINAL COURSE SHALL EQUAL THE THICKNESS OF THE FINAL COURSE.
  - ALL PERMANENT TRANSITIONS SHALL MEET CTDOT LENGTH REQUIREMENTS UNLESS OTHERWISE APPROVED.

TRANSITION BETWEEN NEW AND EXISTING PAVEMENT



- NOTES:**
- FURNISH AND INSTALL 5/8" X 24" DOWELS AND 1/2" EXPANSION JOINTS AT DRIVEWAY APRON IF CONSTRUCTED AGAINST AN EXISTING CONCRETE SIDEWALK.
  - 1/2" LIP OR GREATER, IF REQUIRED BY MUNICIPALITY OF CTDOT

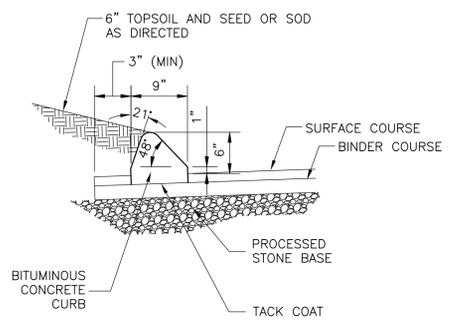
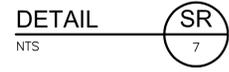
CONCRETE DRIVEWAY APRON RESTORATION



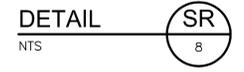
VERTICAL (V)	CURB LENGTH (L)
1"	4 FT MIN.
2"	5 FT MIN.
3"	6 FT MIN.

- NOTES:**
- FOR GRANITE CURB SET THE LAST SECTION TO MATCH EXISTING DRIVE SHOULDER ELEVATION. MINIMUM CLOSURE SECTION SHALL BE 4 FEET.
  - FOR BITUMINOUS OR CONCRETE CURB, DEPRESS CURB TO MEET EXISTING DRIVE SHOULDER. MINIMUM SECTION SHALL BE 10 INCHES.

CURBING TRANSITION AT EXISTING DRIVEWAY

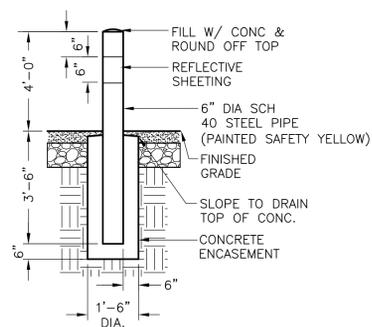


BITUMINOUS CONCRETE CURB 6-INCH REVEAL (TYPE I)

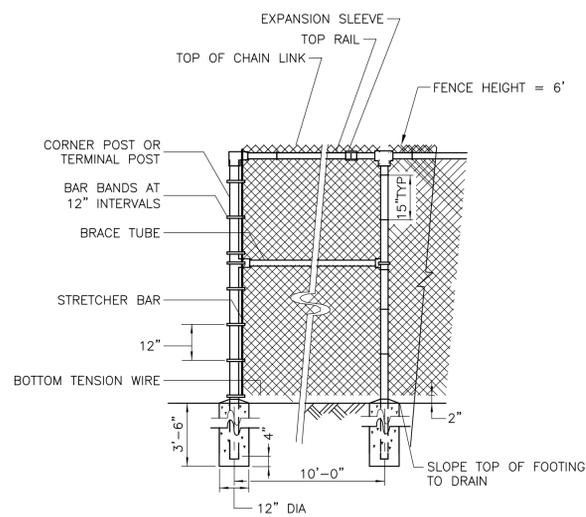






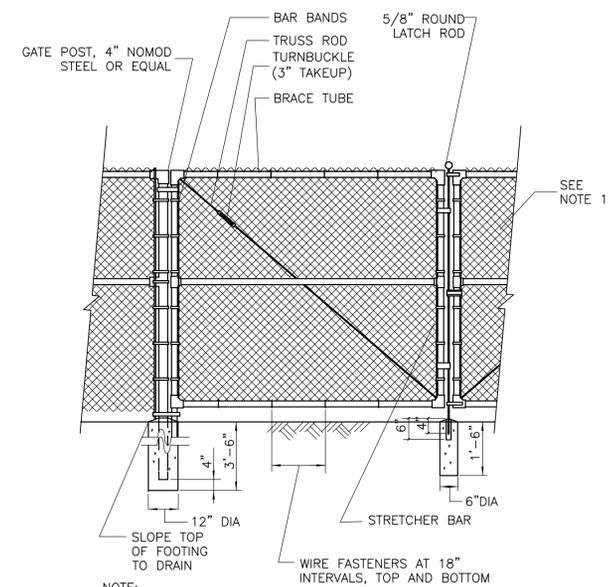


STEEL BOLLARD  
 DETAIL (SR) 23  
 NTS



NOTE:  
 1. PROVIDE SHIELDING PRIVACY STRIPS IN CHAINLINK MESH

CHAIN LINK FENCE (6- FEET HIGH)  
 DETAIL (SR) 24  
 NTS



NOTE:  
 1. PROVIDE SHIELDING PRIVACY STRIPS IN CHAIN LINK MESH.

CHAIN LINK FENCE GATE (6- FEET HIGH)  
 DETAIL (SR) 25  
 NTS



**The Metropolitan District**  
 555 Main Street  
 Hartford, Connecticut

REV. NO.	DATE	DRWN	CHKD	REMARKS

MDC  
 STANDARD  
 DETAIL  
 SHEET

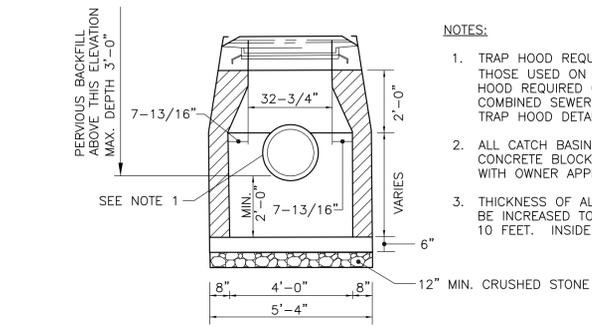
DATE:  
 APRIL 2014

SCALE :  
 AS NOTED

SURFACE RESTORATION  
 STANDARD DETAILS IV

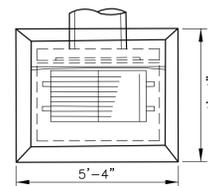
STANDARD SHEET NO.

SR-D-4

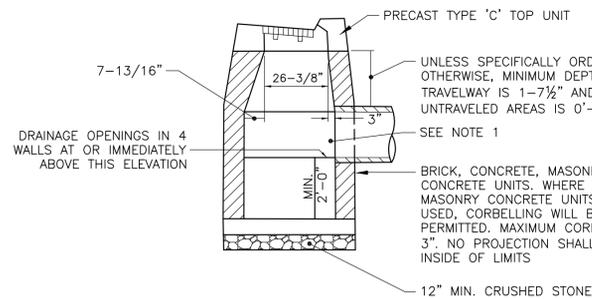


**NOTES:**

- TRAP HOOD REQUIRED ON ALL CATCH BASINS EXCEPT THOSE USED ON MAIN LINE DRAIN (FLOW THRU). TRAP HOOD REQUIRED ON DOWNSTREAM CONNECTION BEFORE COMBINED SEWER. REFER TO CATCH BASIN TRAP AND TRAP HOOD DETAILS.
- ALL CATCH BASINS SHALL BE PRECAST CONCRETE. CONCRETE BLOCK CATCH BASINS SHALL BE USED ONLY WITH OWNER APPROVAL.
- THICKNESS OF ALL CATCH BASINS OVER 10 FEET SHALL BE INCREASED TO 12 INCHES STARTING AFTER THE FIRST 10 FEET. INSIDE DIMENSION SHALL REMAIN THE SAME.

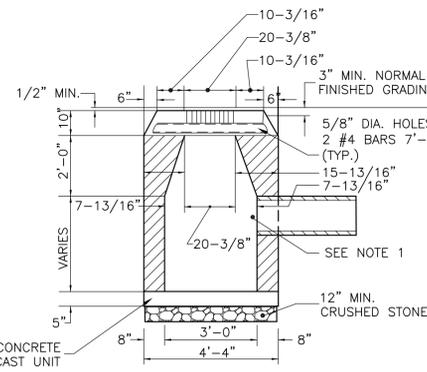


**PLAN**

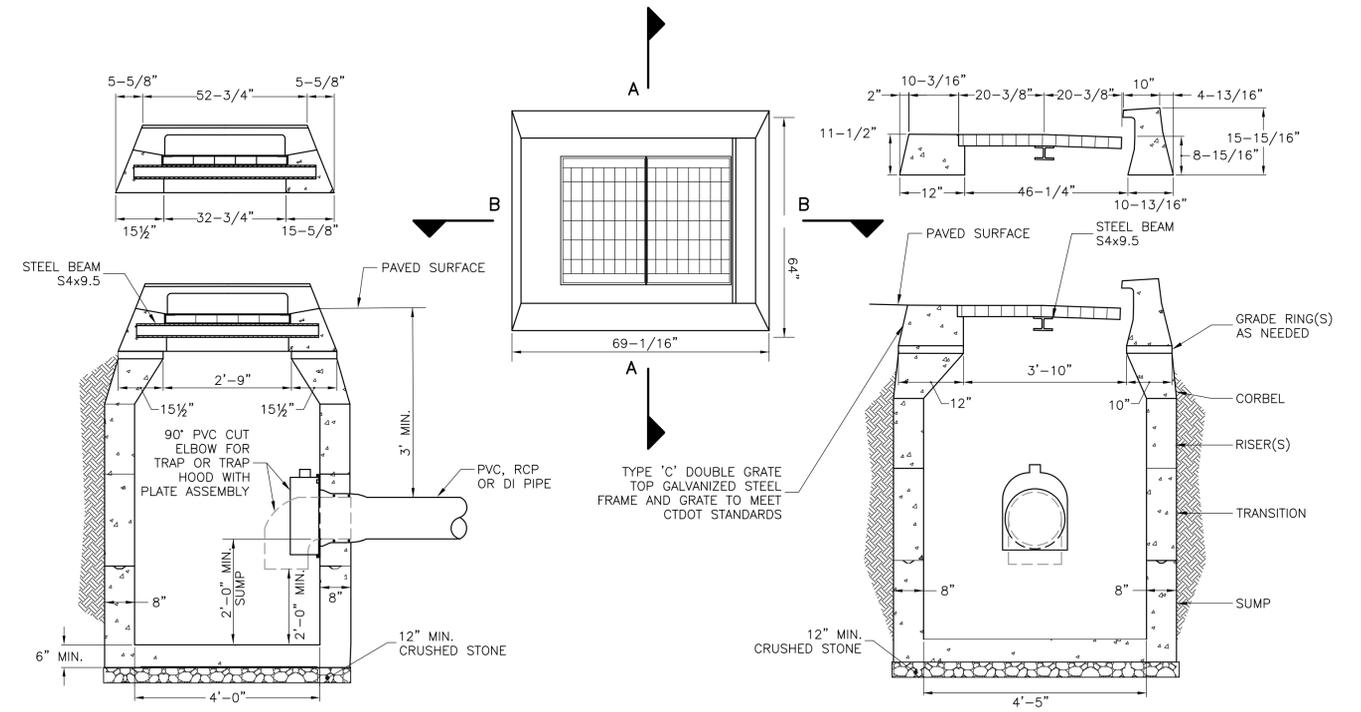


**TYPE 'C' CATCH BASIN**

**CDOT STANDARD CATCH BASIN**

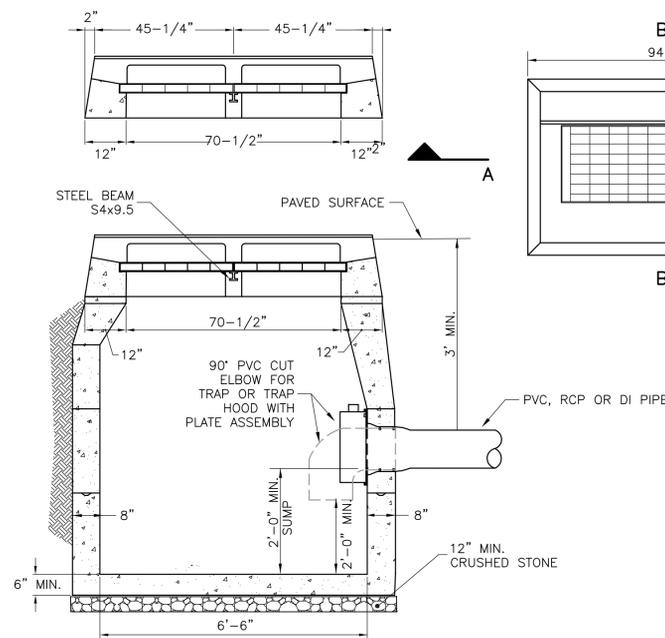


**TYPE 'C-L' CATCH BASIN**



**SECTION A-A CDOT DOUBLE GRATE PRECAST CONCRETE CATCH BASIN (TYPE I)**

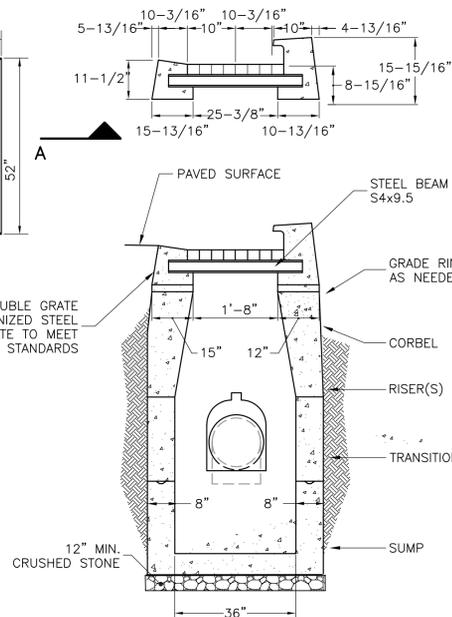
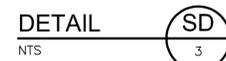
**SECTION B-B**



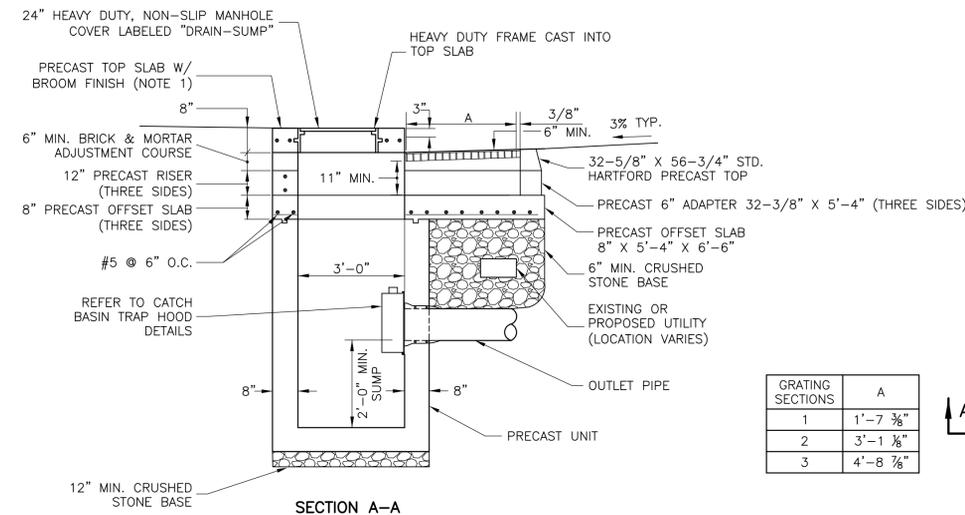
**SECTION A-A**

**CDOT DOUBLE GRATE PRECAST CONCRETE CATCH BASIN (TYPE II)**

**SECTION B-B**

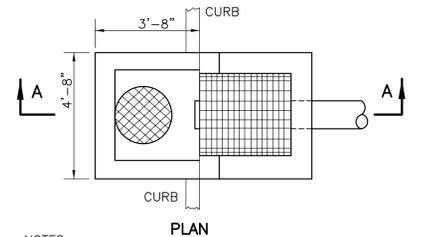


**CDOT PRECAST CATCH BASIN WITH OFFSET SUMP (TYPE E)**



**SECTION A-A**

GRATING SECTIONS	A
1	1'-7 3/8"
2	3'-1 1/8"
3	4'-8 1/8"

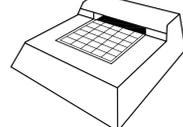
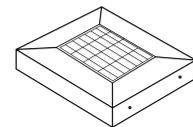
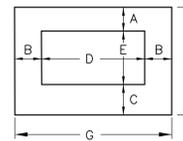
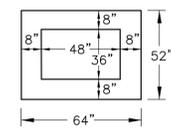


**PLAN**

**NOTES:**

- SET TOP SLAB TO MEET EXISTING SLOPE OF CURB LINE AND CROSS SLOPE OF SIDEWALK. ADJUST DIMENSIONS OF CAST-IN-PLACE SECTION.
- PRECAST SECTIONS SHALL BE CAPABLE OF WITHSTANDING AASHTO H-20 TRAFFIC LOADING.

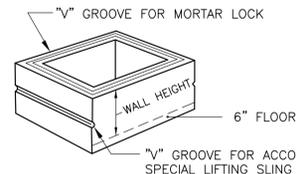
REV. NO.	DATE	DRWN	CHKD	REMARKS



TYPE C-L

TYPE C

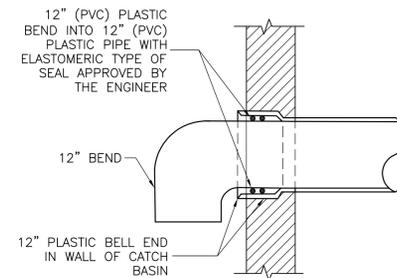
TYPE	A	B	C	D	E	F	G
C	8"	12"	12"	32 3/4"	25 3/8"	45 3/8"	56 3/4"
CL	12"	12"	12"	32 1/2"	21 1/2"	44 1/2"	56 1/2"



PRECAST CONCRETE CATCH BASIN TOPS AND SUMPS

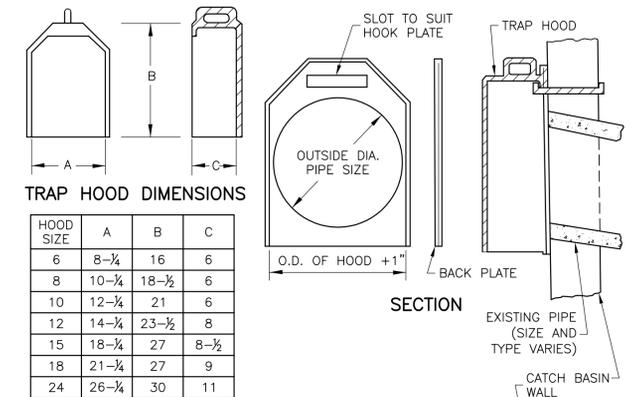
DETAIL SD  
NTS 5

NOTE:  
1. DIMENSIONS FOR TOP OF SUBSTRUCTURE BUILT OF BLOCKS, OR CAST IN PLACE.



ELBOW TRAP FOR CATCH BASIN

DETAIL SD  
NTS 6



TRAP HOOD DIMENSIONS

HOOD SIZE	A	B	C
6	8-1/4"	16"	6"
8	10-1/4"	18-1/2"	6"
10	12-1/4"	21"	6"
12	14-1/4"	23-1/2"	8"
15	18-1/4"	27"	8-1/2"
18	21-1/4"	27"	9"
24	26-1/4"	30"	11"

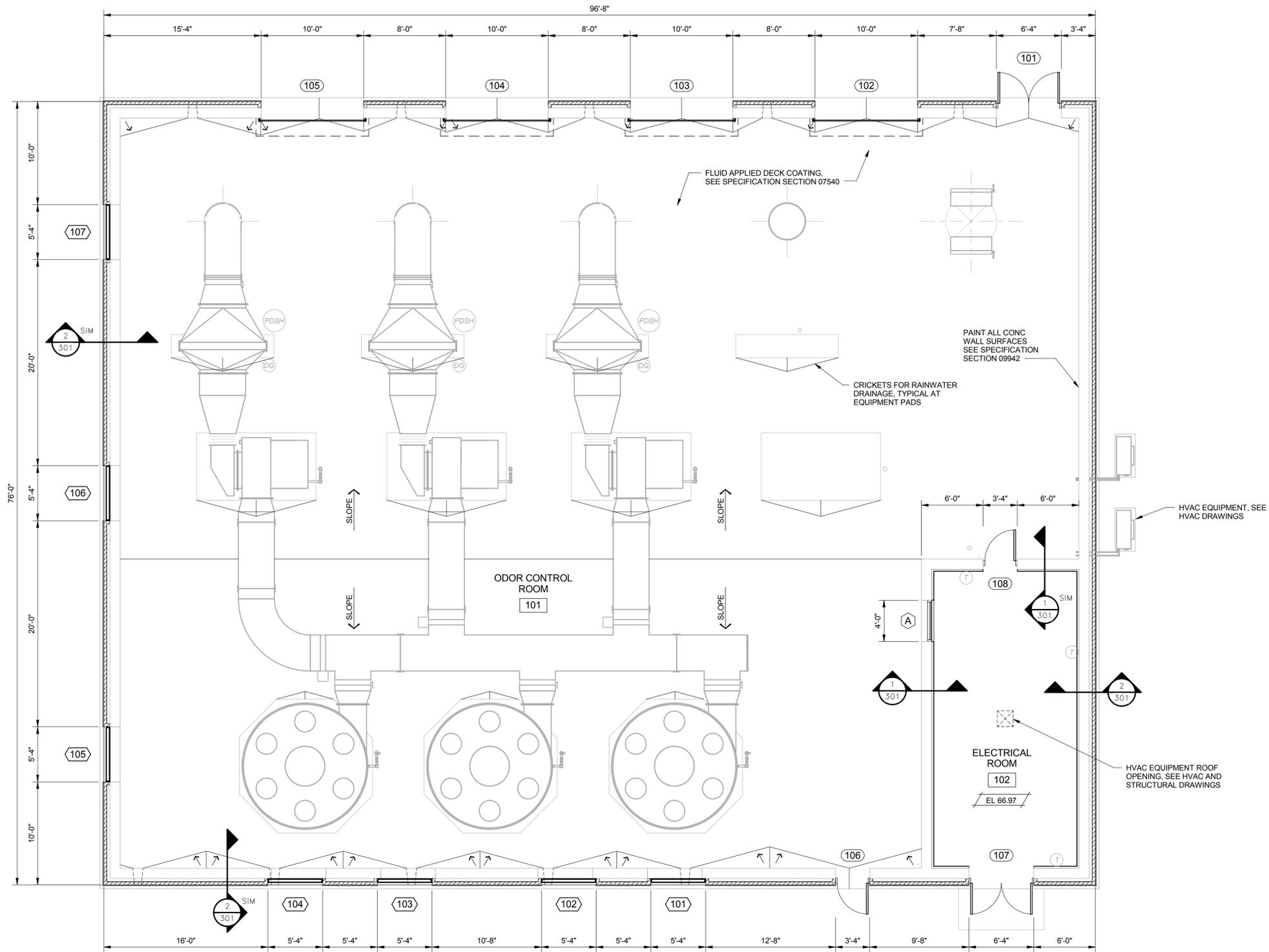
NOTE:

1. BACK PLATE SHALL BE SUPPLIED ONLY WHEN REQUESTED.

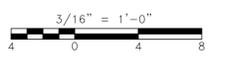


CATCH BASIN TRAP HOODS  
TRAP HOODS  
DETAIL SD  
NTS 7

REV. NO.	DATE	DRWN	CHKD	REMARKS



OPERATING FLOOR PLAN  
3/16" = 1'-0"



VERTICAL DATUM IS NGVD 29  
HORIZONTAL DATUM IS NAD 83/92

**MDC**  
The Metropolitan District  
555 Main Street  
Hartford, Connecticut

REV. NO.	DATE	DRWN	CHKD	REMARKS

FILE NAME: \_\_\_\_\_  
DESIGNED BY: \_\_\_\_\_ PDR  
DRAWN BY: \_\_\_\_\_ CTH  
CHK'D BY: \_\_\_\_\_  
X-CHK'D BY: \_\_\_\_\_  
APPROVED BY: \_\_\_\_\_  
DATE: MAY 2015

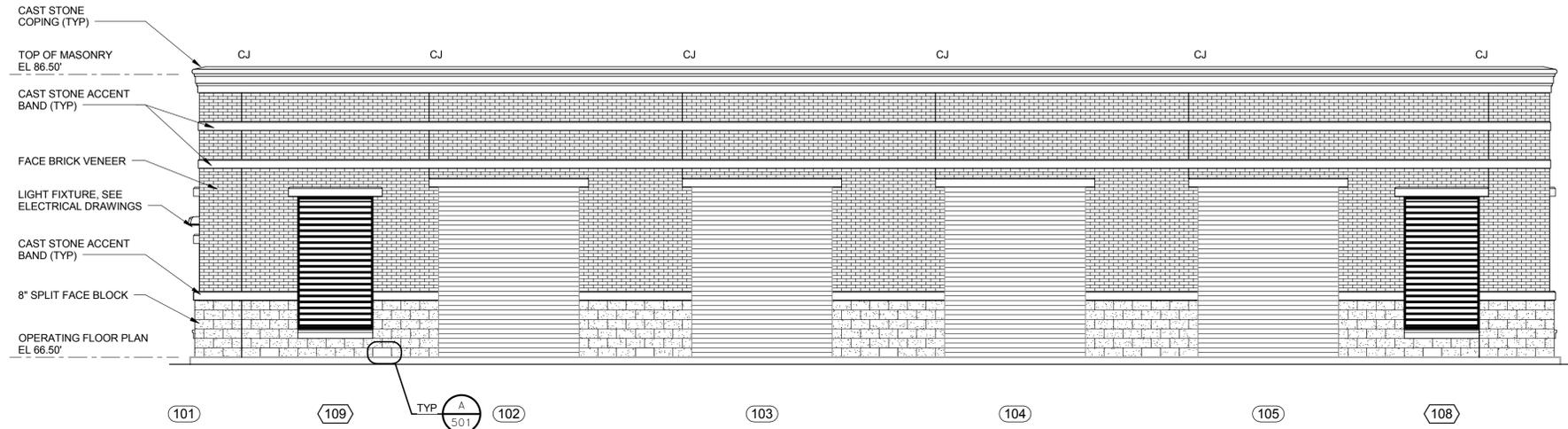
**AECOM** 500 ENTERPRISE DRIVE, SUITE 1A  
ROCKY HILL, CT 06067  
PHONE (860) 263-5800

in association with  
**BLACK & VEATCH**

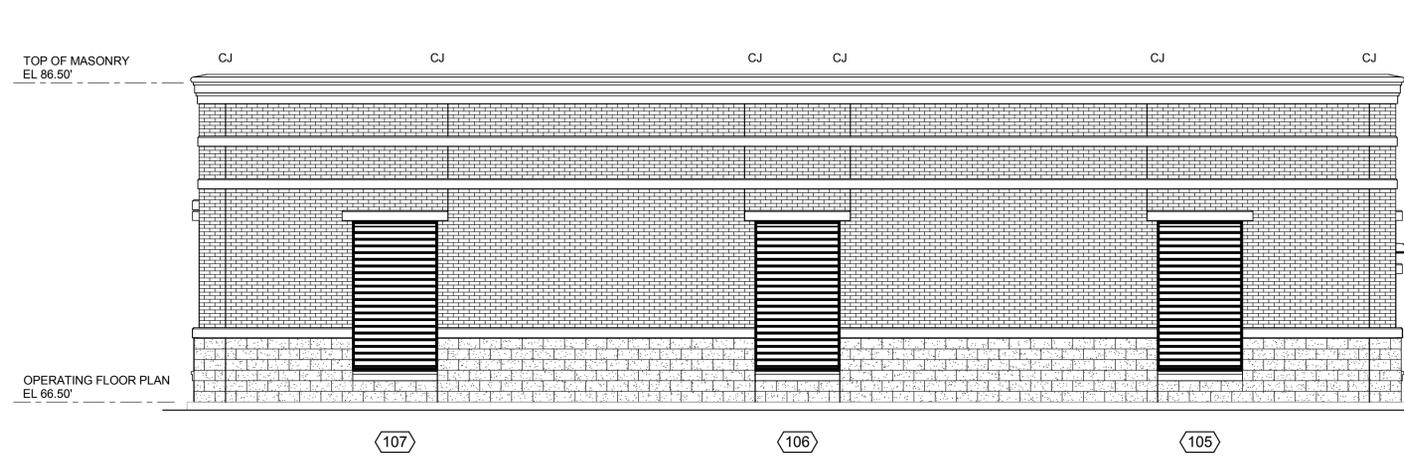
CONTRACT NO. 2015B-27  
SOUTH HARTFORD CONVEYANCE  
AND STORAGE TUNNEL

CONTRACT 2  
RETRIEVAL SHAFT  
ODOR CONTROL ENCLOSURE -  
PLAN  
ARCHITECTURAL

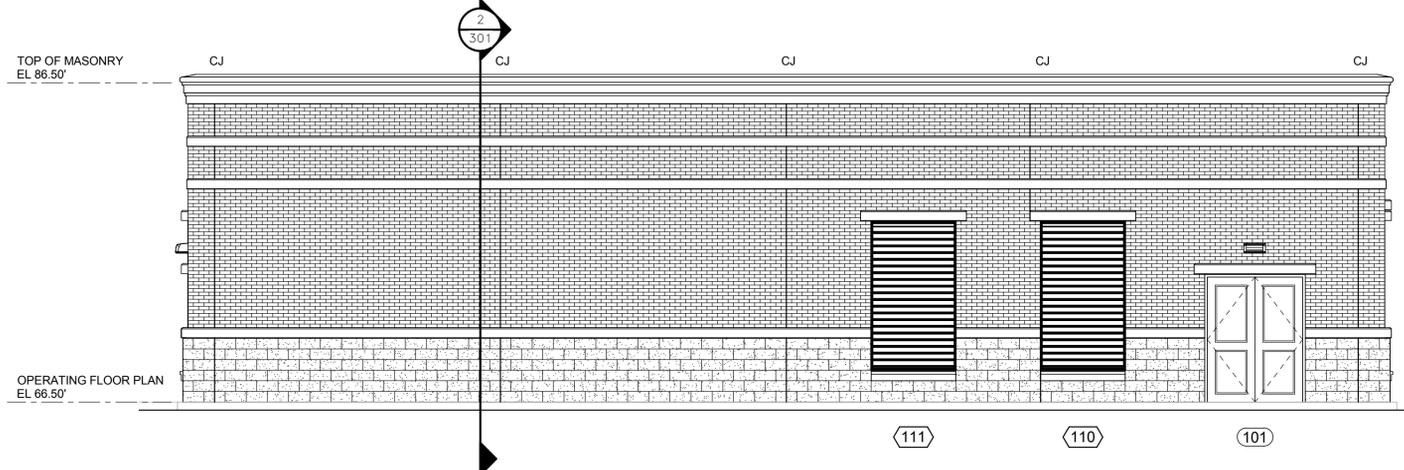
PLAN NUMBER  
SHEET NO.  
216 A-101



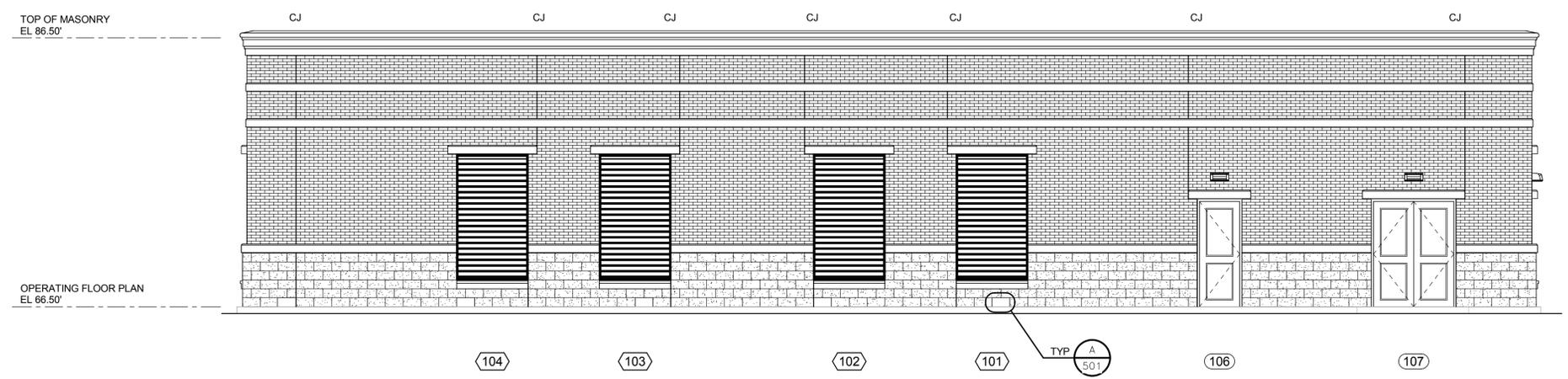
**NORTH ELEVATION**  
3/16" = 1'-0"



**WEST ELEVATION**  
3/16" = 1'-0"



**EAST ELEVATION**  
3/16" = 1'-0"

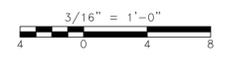


**SOUTH ELEVATION**  
3/16" = 1'-0"

MASONRY AND CAST STONE COLOR SELECTION	
SPLIT-FACE CONCRETE BLOCK	TRENWYTH INDUSTRIES "OPAL"
FACE BRICK VENEER	GLEN-GERY BRICK "GARRISON GREY"
CAST STONE	READING ROCK ROCKCAST "CRYSTAL WHITE"

NOTE: THE COLORS SELECTED FOR THE FACE BRICK, SPLIT-FACE CONCRETE BLOCK, AND CAST STONE (LINTELS, SILLS, FRIEZE, CORNICE, ETC.) WERE CHOSEN FROM COLORS AVAILABLE DURING DETAILED DESIGN. AT THE TIME OF CONSTRUCTION, COLORS FOR THESE MATERIALS SHALL CLOSELY MATCH THESE PRE-SELECTED COLORS AND MAY BE ADJUSTED SLIGHTLY BASED ON THE MANUFACTURERS' COLOR AVAILABILITY.

- NOTES:**
1. VENEER CONTROL JOINT (CJ)
  2. SEE STRUCTURAL DRAWINGS FOR CONCRETE BACK-UP WALL DESIGN.



VERTICAL DATUM IS NGVD 29  
HORIZONTAL DATUM IS NAD 83/92

**MDC**  
**The Metropolitan District**  
555 Main Street  
Hartford, Connecticut

REV. NO.	DATE	DRWN	CHKD	REMARKS
1	7/15	CTH	LEN	FACADE REVISIONS

FILE NAME: AOC001.rvt  
DESIGNED BY: P. RISHHEL  
DRAWN BY: C. HOUSEMAN  
CHK'D BY: L. NEMETH  
X-CHK'D BY: L. NEMETH  
APPROVED BY: J. SULLIVAN  
DATE: MAY 2015

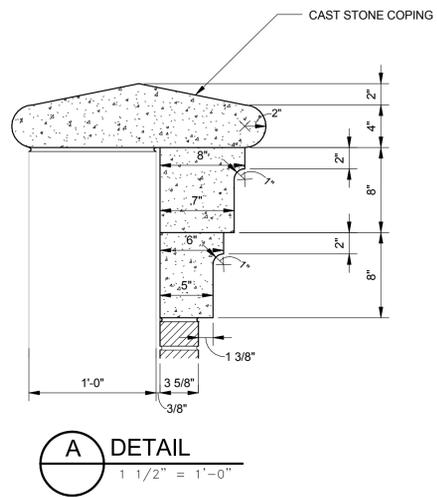
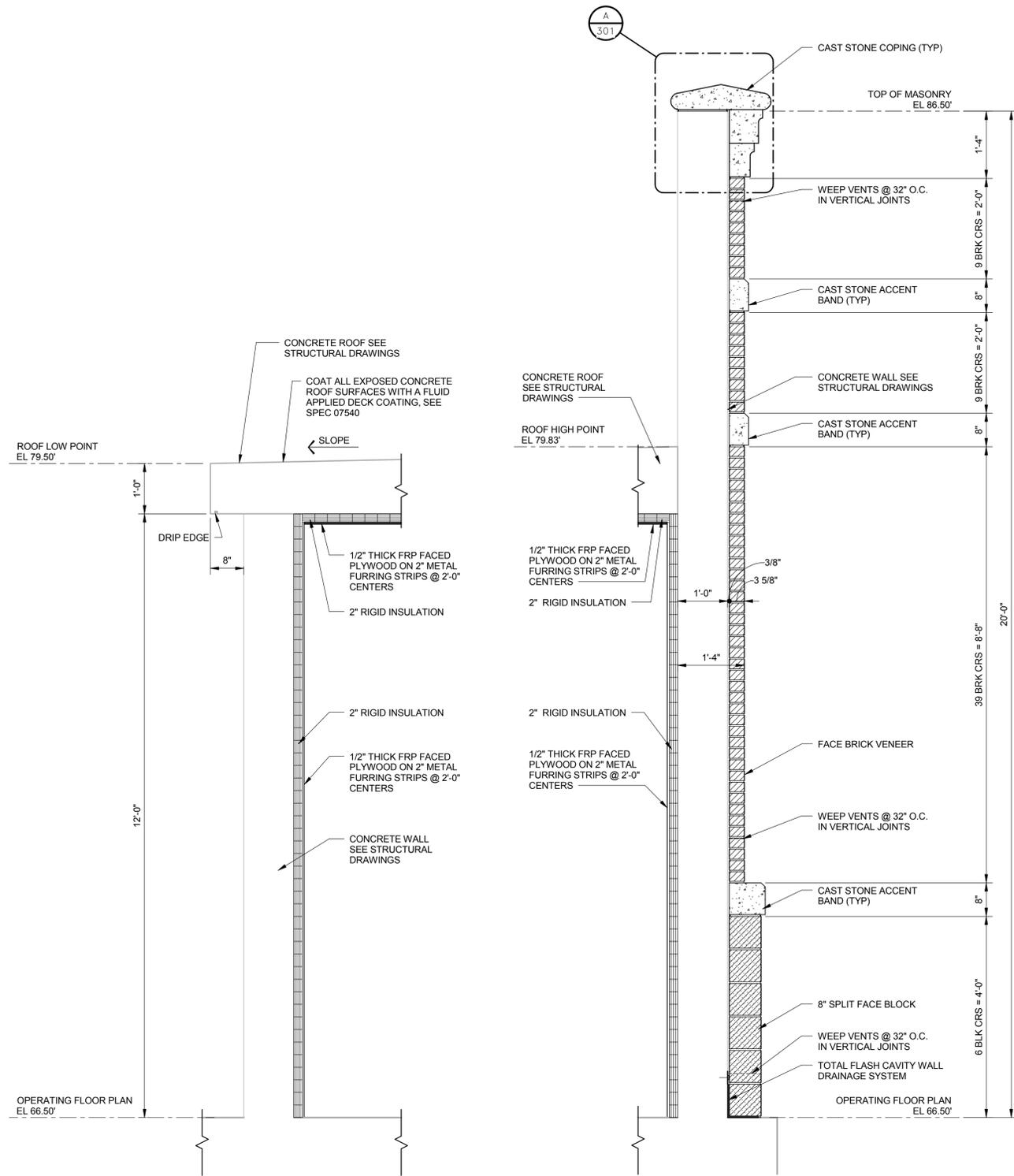
**AECOM** 500 ENTERPRISE DRIVE, SUITE 1A  
ROCKY HILL, CT 06067  
PHONE (860) 263-5800

in association with  
**BLACK & VEATCH**

**CONTRACT NO. 2015B-27**  
**SOUTH HARTFORD CONVEYANCE**  
**AND STORAGE TUNNEL**

**CONTRACT 2**  
**RETRIEVAL SHAFT**  
**ODOR CONTROL ENCLOSURE -**  
**ELEVATIONS**  
ARCHITECTURAL

PLAN NUMBER  
SHEET NO.  
**216 A-201**



1 SECTION  
101 3/4" = 1'-0"

2 SECTION  
101 3/4" = 1'-0"



VERTICAL DATUM IS NGVD 29  
HORIZONTAL DATUM IS NAD 83/92

REV. NO.	DATE	DRWN	CHKD	REMARKS
1	7/15	CTH	LEN	FACADE REVISIONS

FILE NAME:	AOC001.rvt
DESIGNED BY:	P. RISHHEL
DRAWN BY:	C. HOUSEMAN
CHK'D BY:	L. NEMETH
X-CHK'D BY:	L. NEMETH
APPROVED BY:	J. SULLIVAN
DATE:	MAY 2015

**AECOM** 500 ENTERPRISE DRIVE, SUITE 1A  
ROCKY HILL, CT 06067  
PHONE (860) 263-5800

in association with  
**BLACK & VEATCH**

CONTRACT NO. 2015B-27  
SOUTH HARTFORD CONVEYANCE  
AND STORAGE TUNNEL

CONTRACT 2  
RETRIEVAL SHAFT  
ODOR CONTROL ENCLOSURE -  
WALL SECTIONS  
ARCHITECTURAL

PLAN NUMBER	216 A-301
SHEET NO.	

RETRIEVAL SHAFT ODOR CONTROL ENCLOSURE ROOM FINISH SCHEDULE																		
ROOM No.	ROOM NAME	FLOOR		WALLS												CEILING		REMARKS
		MATRL	FINISH	NORTH			EAST			SOUTH			WEST			MATRL	FINISH	
101	ODOR CONTROL ROOM	CO	LE	CO	LE	NO	CO	LE	NO	CO	LE	NO	CO	LE	NO	CO	LE	20'-0"
102	ELECTRICAL ROOM	CO	FS	FRP	FF	NO	FRP	FF	NO	FRP	FF	NO	FRP	FF	NO	FRP	FF	12'-0"

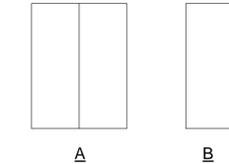
RETRIEVAL SHAFT ODOR CONTROL ENCLOSURE DOOR SCHEDULE													
No. (D)	DOOR SIZE		DOOR										REMARKS
	WIDTH	HEIGHT	MATERIAL	HEAD	JAMB	SILL	TYPE (D)	HDWR	RATING	MATERIAL	DEPTH		
101	PR	6'-0"	7'-10"	FRP	1	2	3	A	1	-	FRP	5 3/4"	MANUAL OPERATION
102		10'-0"	12'-0"	RA	7	8	9	C	-	-	RA	0"	
103		10'-0"	12'-0"	RA	7	8	9	C	-	-	RA	0"	
104		10'-0"	12'-0"	RA	7	8	9	C	-	-	RA	0"	
105		10'-0"	12'-0"	RA	7	8	9	C	-	-	RA	0"	
106		3'-0"	7'-10"	FRP	1	2	3	B	2	-	FRP	5 3/4"	
107	PR	6'-0"	7'-10"	FRP	1	2	3	A	3	-	FRP	5 3/4"	
108		3'-0"	7'-10"	FRP	4	5	6	B	4	-	FRP	5 3/4"	

RETRIEVAL SHAFT ODOR CONTROL ENCLOSURE WINDOW SCHEDULE											
COUNT	TYPE (W)	OPENING		WINDOW				GLASS	TOP ELEV	COMMENTS	
		WIDTH	HEIGHT	MATERIAL	HEAD	JAMB	MULL				SILL
1	B	4'-0"	4'-0"	AL	10	11	-	12	1" INSULATED	74'-6"	

RETRIEVAL SHAFT ODOR CONTROL ENCLOSURE LOUVER SCHEDULE							
No. (L)	OPENING		LOUVER				REMARKS
	WIDTH	HEIGHT	TYPE	HEAD	JAMB	SILL	
101	5'-4"	9'-4"	AL	-	-	-	77'-10"
102	5'-4"	9'-4"	AL	-	-	-	77'-10"
103	5'-4"	9'-4"	AL	-	-	-	77'-10"
104	5'-4"	9'-4"	AL	-	-	-	77'-10"
105	5'-4"	9'-4"	AL	-	-	-	77'-10"
106	5'-4"	9'-4"	AL	-	-	-	77'-10"
107	5'-4"	9'-4"	AL	-	-	-	77'-10"

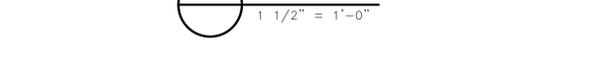
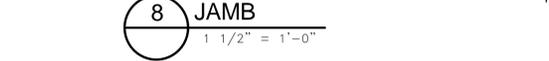
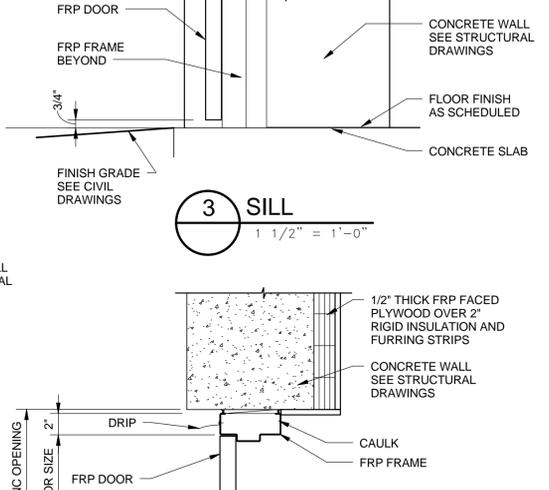
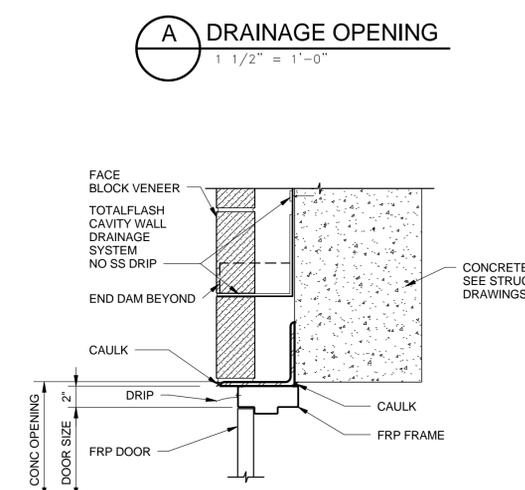
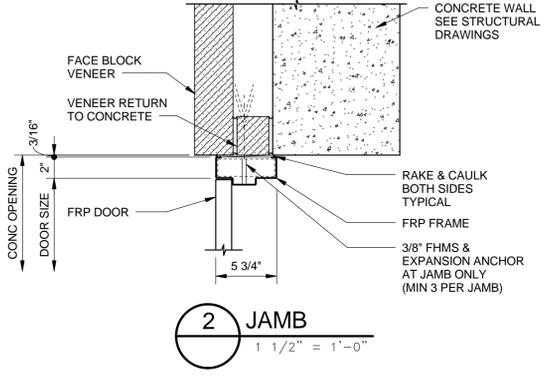
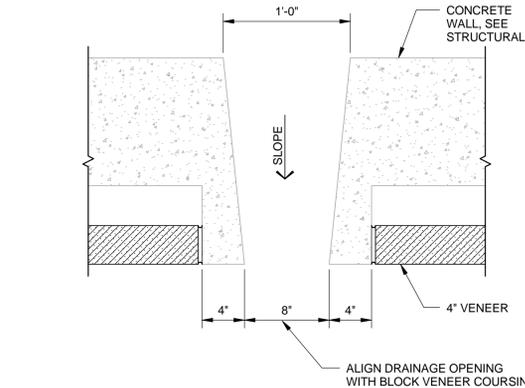
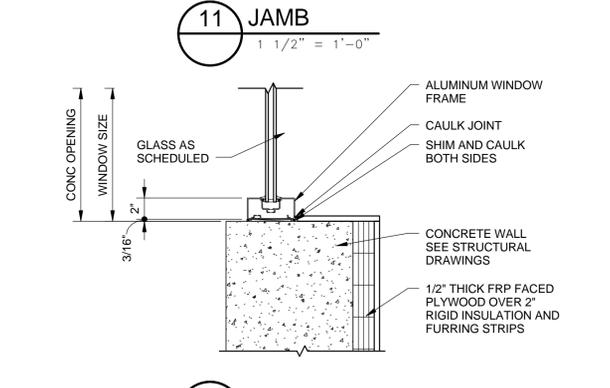
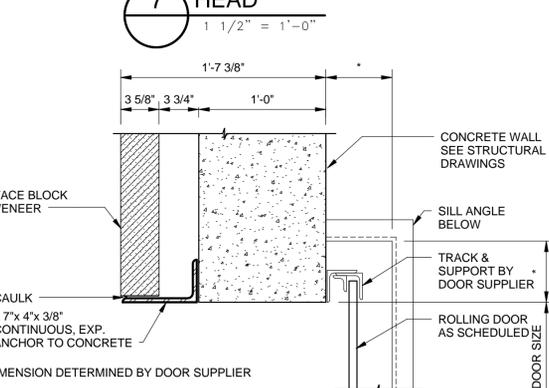
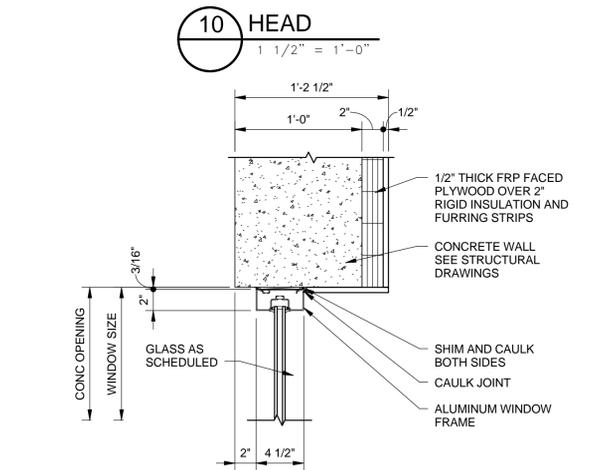
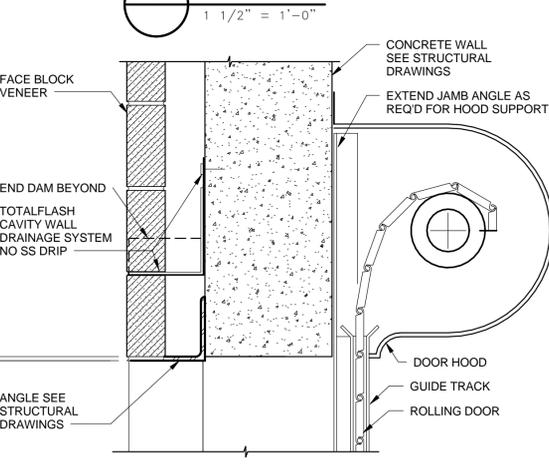
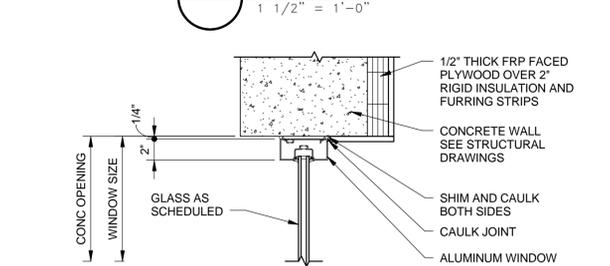
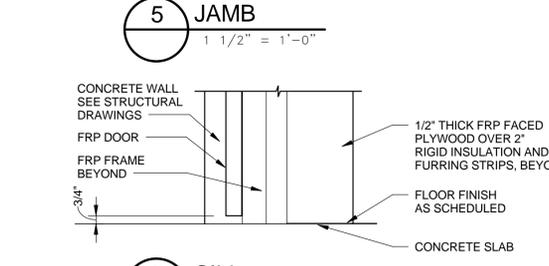
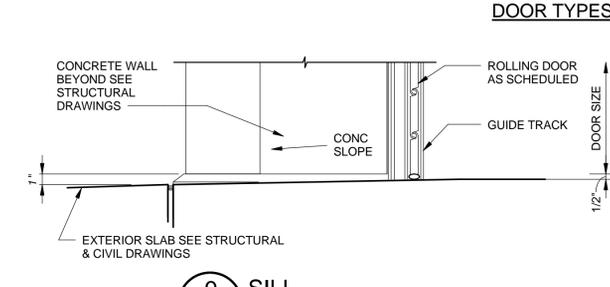
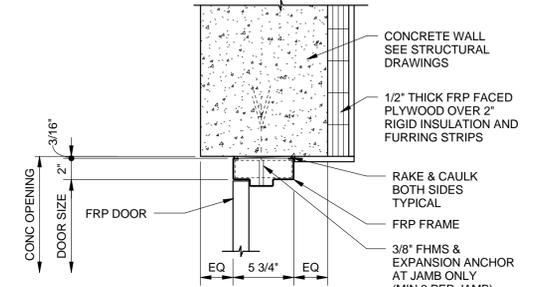
**LEGEND**

AL - ALUMINUM      FRP - FIBERGLASS REINFORCED PLASTIC  
CO - CONCRETE      LE - LIQUID ELASTOMERIC COVERING  
FF - FACTORY FINISH      NO - NONE  
FS - FLOOR SEALER      RA - ROLLING ALUMINUM



**DOOR TYPES**

A      B



1 1/2" = 1'-0"

VERTICAL DATUM IS NGVD 29  
HORIZONTAL DATUM IS NAD 83/92

**MDC** The Metropolitan District  
555 Main Street  
Hartford, Connecticut

REV. NO.	DATE	DRWN	CHKD	REMARKS

FILE NAME: \_\_\_\_\_  
DESIGNED BY: PDR  
DRAWN BY: CTH  
CHK'D BY: \_\_\_\_\_  
X-CHK'D BY: \_\_\_\_\_  
APPROVED BY: \_\_\_\_\_  
DATE: FEBRUARY 2015

**90% SUBMITTAL NOT FOR CONSTRUCTION**

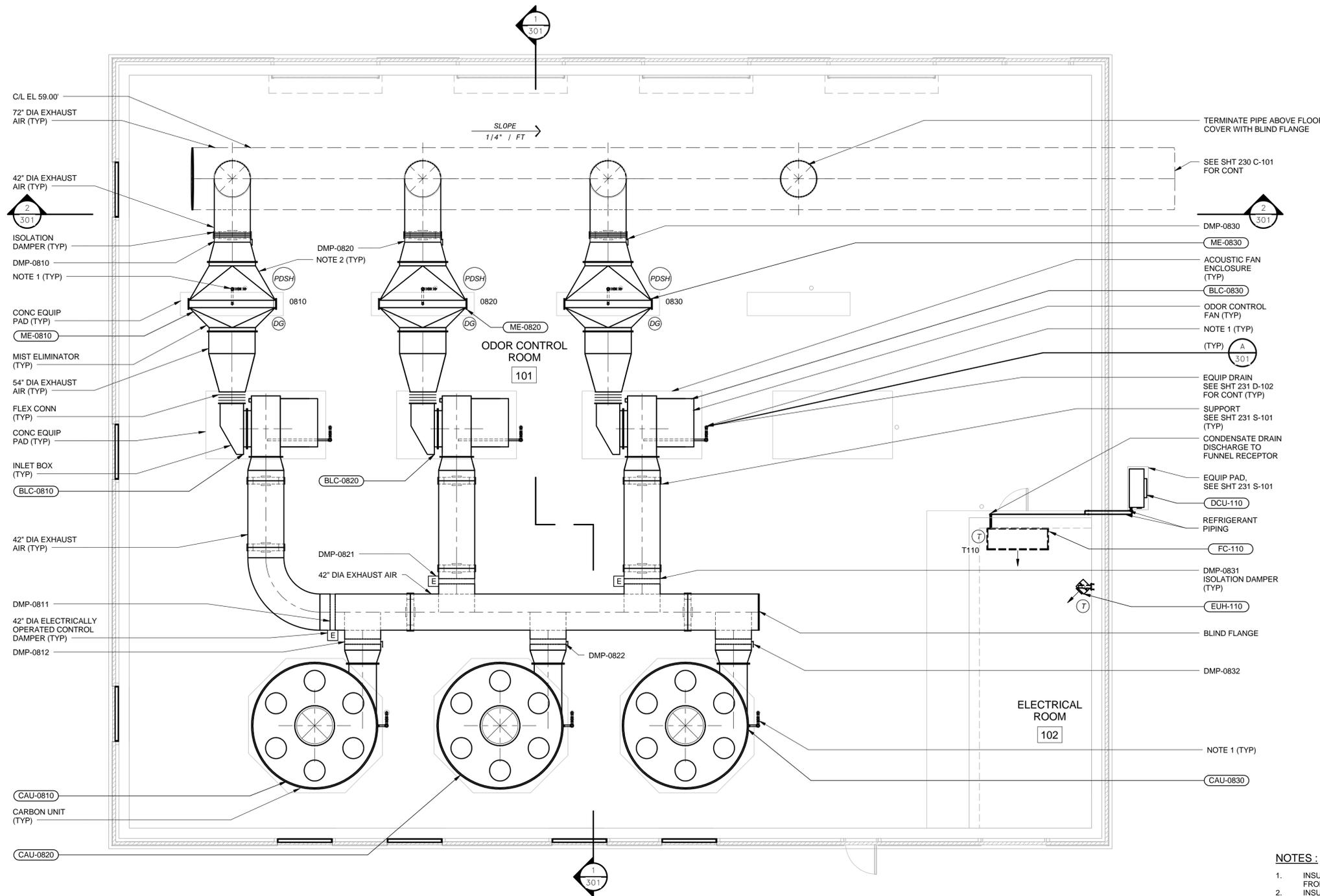
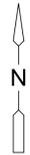
**AECOM** 500 ENTERPRISE DRIVE, SUITE 1A  
ROCKY HILL, CT 06067  
PHONE (860) 263-5800

in association with  
**BLACK & VEATCH**

CONTRACT NO. 20XX-XX  
SOUTH HARTFORD CONVEYANCE AND STORAGE TUNNEL

CONTRACT 2  
GENERAL  
SCHEDULES AND DETAILS  
ARCHITECTURAL

PLAN NUMBER  
SHEET NO.  
**299 A-501**



PLAN AT EL 66.50'  
3/16" = 1'-0"

- NOTES:**
- INSULATE AND HEAT TRACE ALL ABOVE GROUND CONDENSATE PIPE FROM CAU, BLC AND ME.
  - INSULATE MIST ELIMINATOR LEAVING ACCESS FOR FILTER REMOVAL.



VERTICAL DATUM IS NGVD 29  
HORIZONTAL DATUM IS NAD 83/92

**MDC**  
**The Metropolitan District**  
555 Main Street  
Hartford, Connecticut

REV. NO.	DATE	DRWN	CHKD	REMARKS

FILE NAME: \_\_\_\_\_  
DESIGNED BY: \_\_\_\_\_  
DRAWN BY: \_\_\_\_\_  
CHK'D BY: \_\_\_\_\_  
X-CHK'D BY: \_\_\_\_\_  
APPROVED BY: \_\_\_\_\_  
DATE: FEBRUARY 2015

**AECOM** 500 ENTERPRISE DRIVE, SUITE 1A  
ROCKY HILL, CT 06067  
PHONE (860) 263-5800

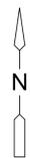
in association with  
**BLACK & VEATCH**

**90% SUBMITTAL  
NOT FOR  
CONSTRUCTION**

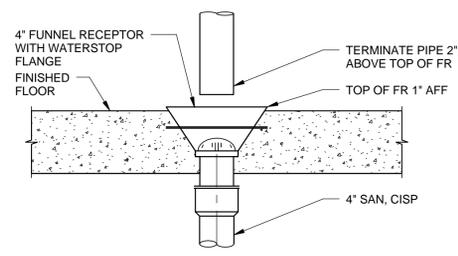
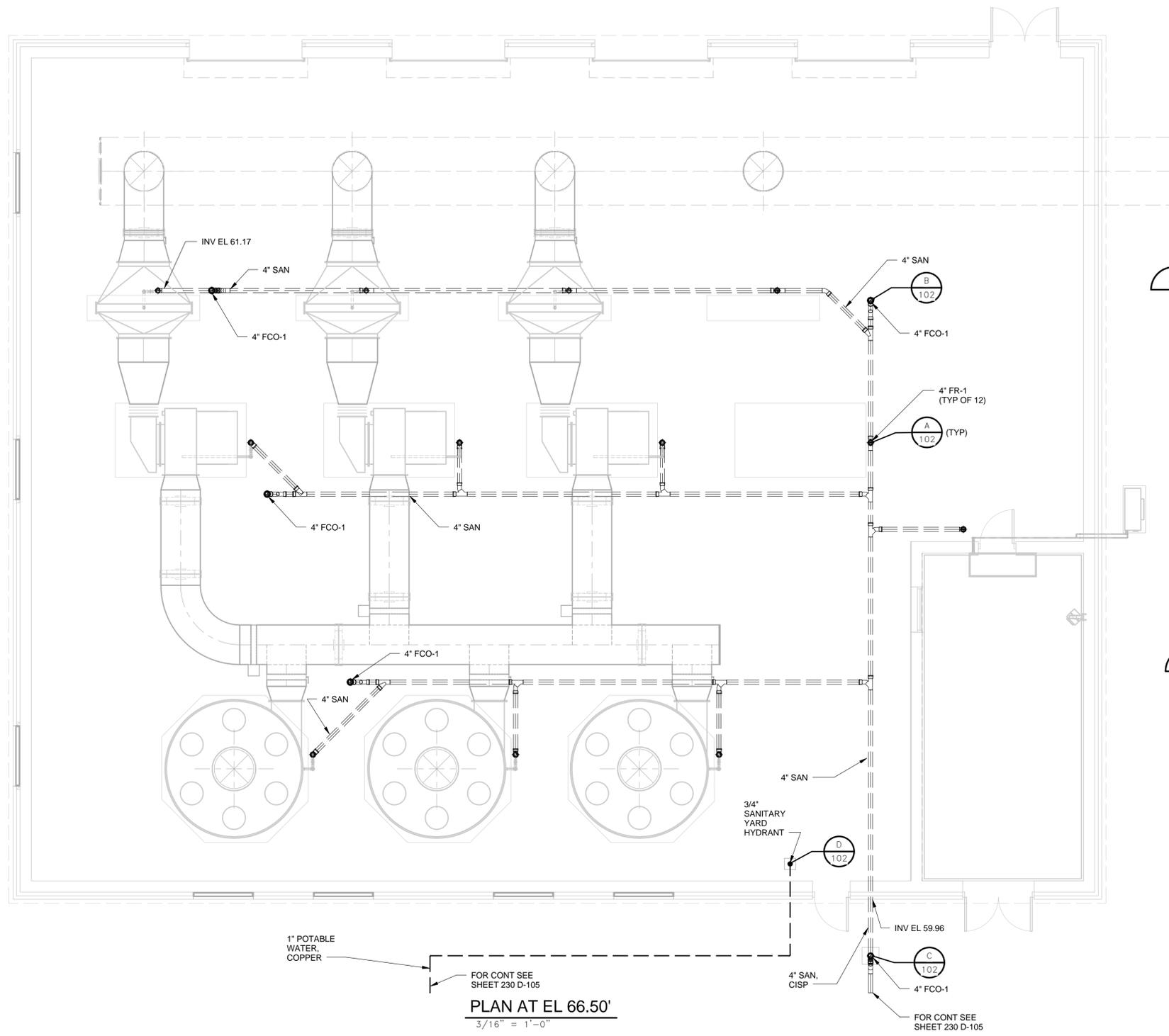
CONTRACT NO. 20XX-XX  
SOUTH HARTFORD CONVEYANCE  
AND STORAGE TUNNEL

CONTRACT 2  
**RETRIEVAL SHAFT  
ODOR CONTROL PLAN**  
MECHANICAL

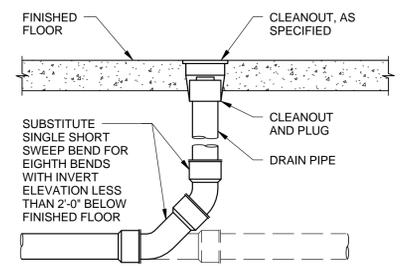
PLAN NUMBER  
SHEET NO.  
**231 D-101**



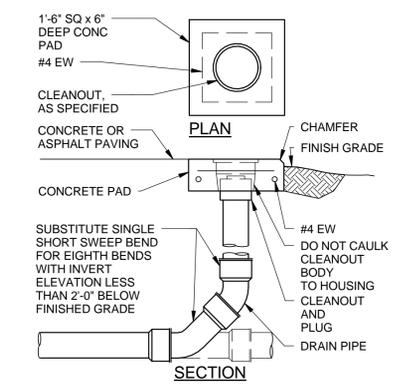
PLUMBING - PIPING ACCESSORIES SCHEDULE				
UNIT NUMBER	MANUFACTURER	MODEL	DESCRIPTION	NOTES
FCO-1	SMITH	4111 SERIES	HEAVY DUTY FLOOR CLEANOUT, SECURED ROUND ADJUSTABLE NICKEL BRONZE TOP.	
FR-1	SMITH	SERIES 3800 FIGURE SQ-3-1793-DBS	MEDIUM DUTY CAST IRON FUNNEL RECEPTOR, WATERSTOP FLANGE, THREADED OR NO-HUB CONNECTION.	



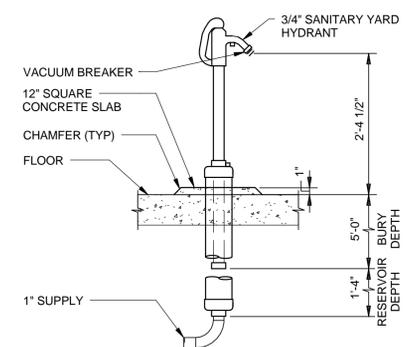
**A FUNNEL DRAIN - NEW FLOOR**  
NO SCALE



**B FLOOR CLEANOUT - NEW FLOOR**  
NO SCALE



**C GRADE CLEANOUT**  
NO SCALE



**D POST HYDRANT**  
NO SCALE

1" POTABLE WATER, COPPER  
FOR CONT SEE SHEET 230 D-105  
**PLAN AT EL 66.50'**  
3/16" = 1'-0"



VERTICAL DATUM IS NGVD 29  
HORIZONTAL DATUM IS NAD 83/92

**MDC**  
**The Metropolitan District**  
555 Main Street  
Hartford, Connecticut

REV. NO.	DATE	DRWN	CHKD	REMARKS

FILE NAME: \_\_\_\_\_  
DESIGNED BY: \_\_\_\_\_  
DRAWN BY: \_\_\_\_\_  
CHK'D BY: \_\_\_\_\_  
X-CHK'D BY: \_\_\_\_\_  
APPROVED BY: \_\_\_\_\_  
DATE: \_\_\_\_\_

**90% SUBMITTAL  
NOT FOR  
CONSTRUCTION**

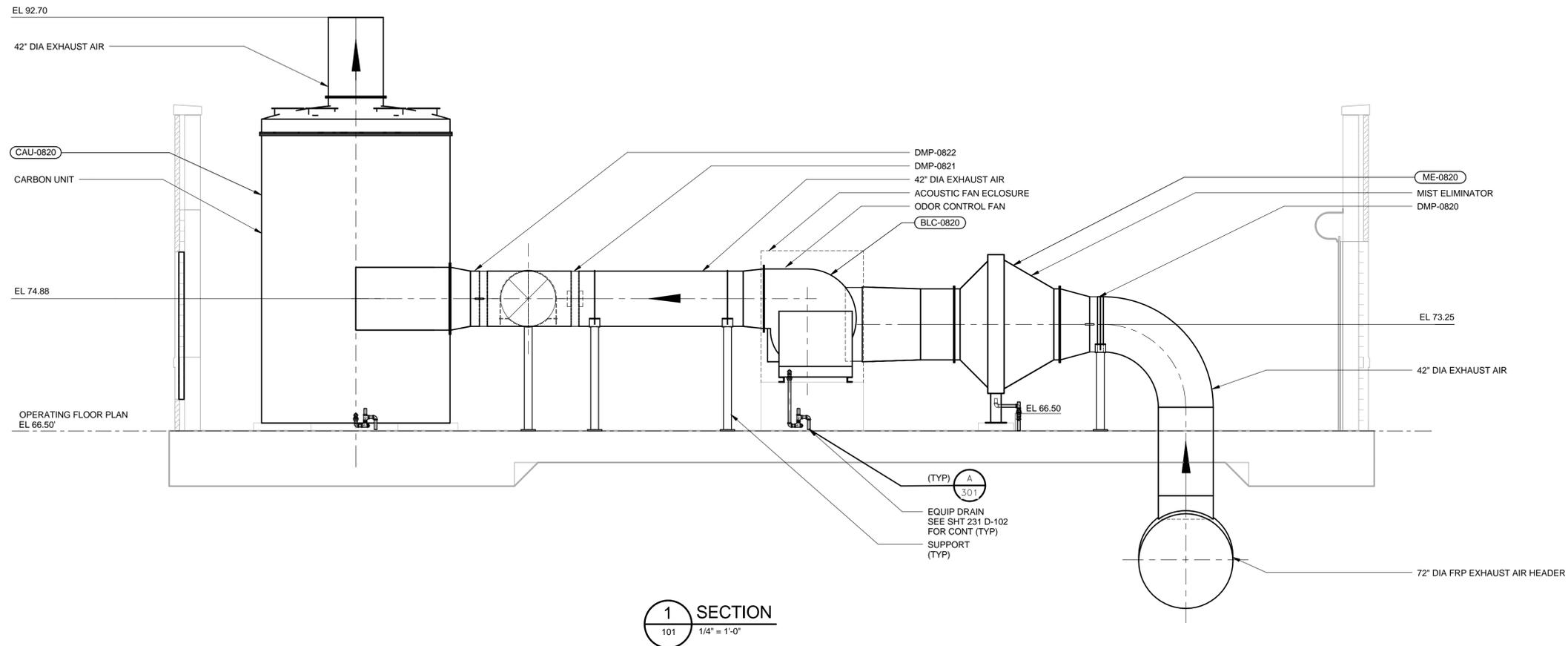
**AECOM** 500 ENTERPRISE DRIVE, SUITE 1A  
ROCKY HILL, CT 06067  
PHONE (860) 263-5800

in association with  
**BLACK & VEATCH**

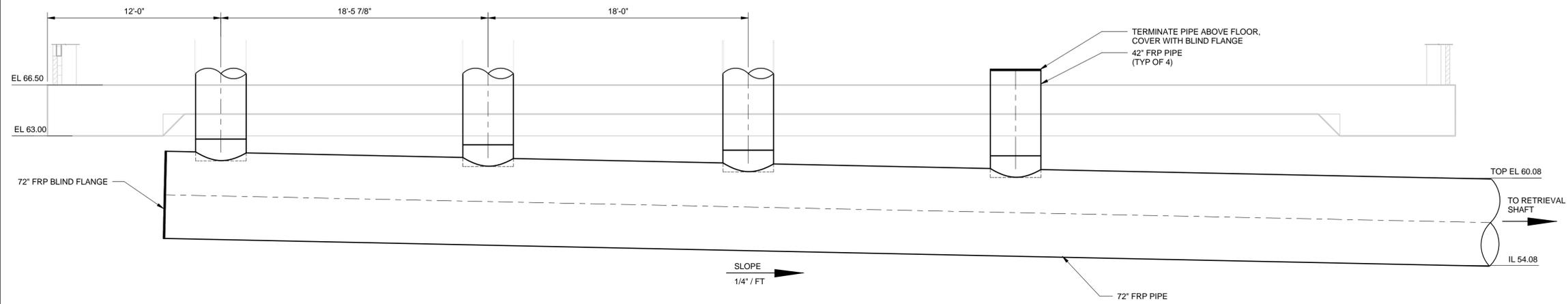
**CONTRACT NO. 20XX-XX**  
**SOUTH HARTFORD CONVEYANCE  
AND STORAGE TUNNEL**

**CONTRACT 2**  
**RETRIEVAL SHAFT  
PLUMBING PLAN, DETAILS AND  
SCHEDULES**  
MECHANICAL

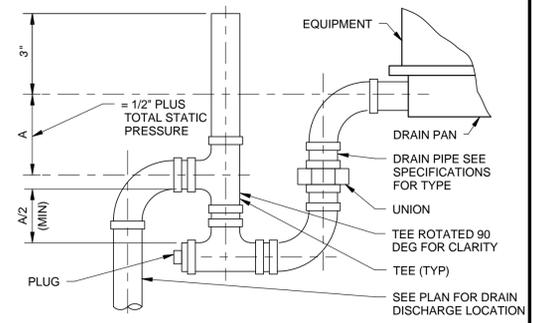
PLAN NUMBER  
SHEET NO.  
**231 D-102**



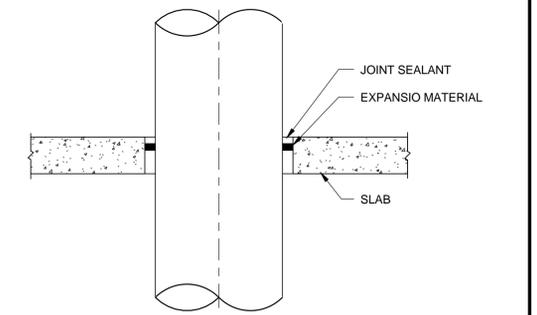
**1 SECTION**  
101 1/4" = 1'-0"



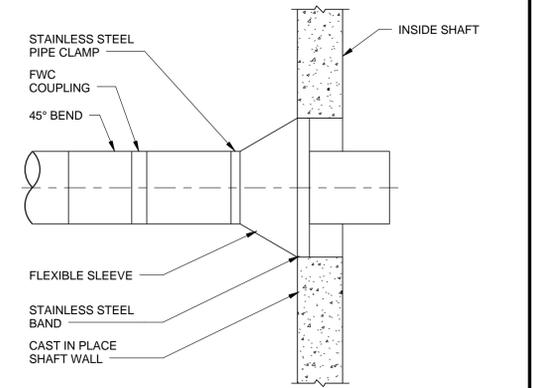
**2 SECTION**  
101 1/4" = 1'-0"



**A DRAIN PAN TRAP - DRAW THROUGH**  
NO SCALE

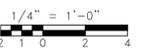


**B SLAB PENETRATION DETAILS**  
NO SCALE



**C SHAFT WALL PENETRATION DETAIL**  
NO SCALE

- NOTES:**
- INSULATE AND HEAT TRACE ALL ABOVE GROUND CONDENSATE PIPE FROM CAU, BLC AND ME.
  - INSULATE MIST ELIMINATOR LEAVING ACCESS FOR FILTER REMOVAL.



VERTICAL DATUM IS NGVD 29  
HORIZONTAL DATUM IS NAD 83/92

**MDC** The Metropolitan District  
555 Main Street  
Hartford, Connecticut

REV. NO.	DATE	DRWN	CHKD	REMARKS

FILE NAME: \_\_\_\_\_  
DESIGNED BY: \_\_\_\_\_  
DRAWN BY: \_\_\_\_\_  
CHK'D BY: \_\_\_\_\_  
X-CHK'D BY: \_\_\_\_\_  
APPROVED BY: \_\_\_\_\_  
DATE: FEBRUARY 2015

**AECOM** 500 ENTERPRISE DRIVE, SUITE 1A  
ROCKY HILL, CT 06067  
PHONE (860) 263-5800

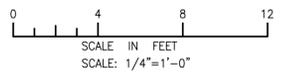
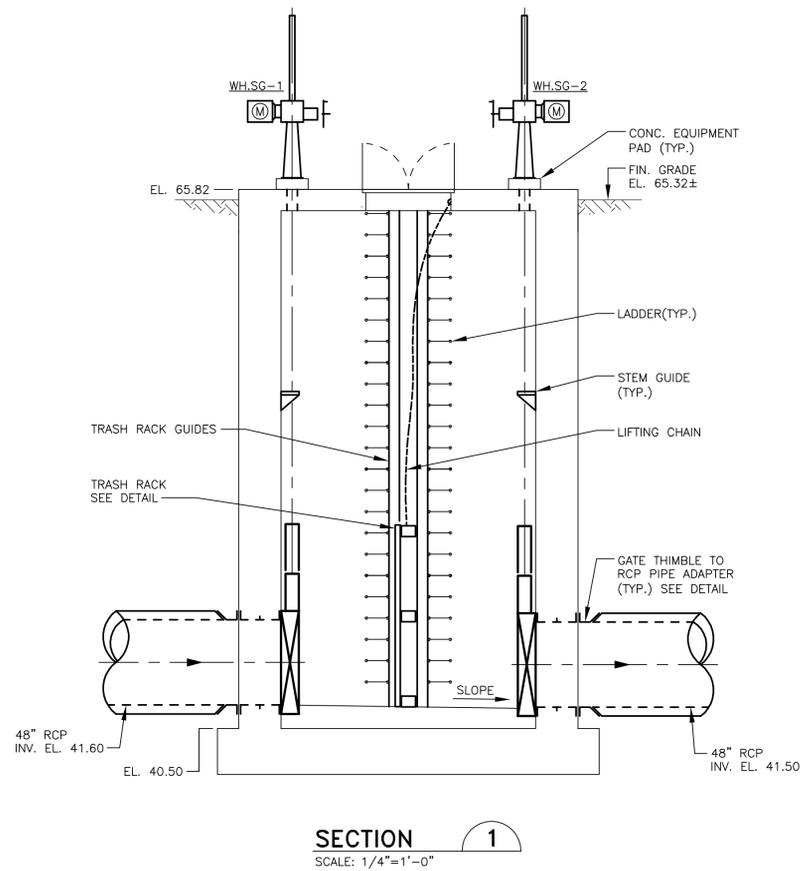
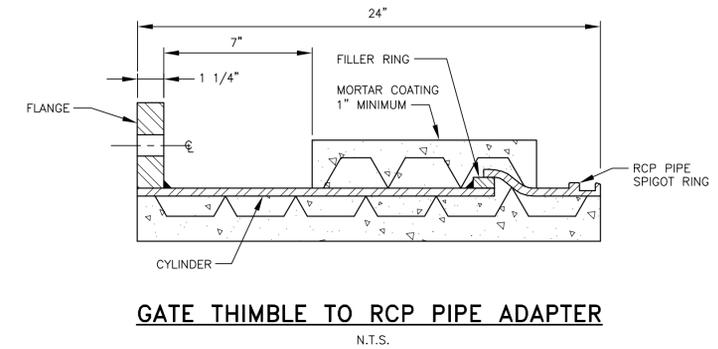
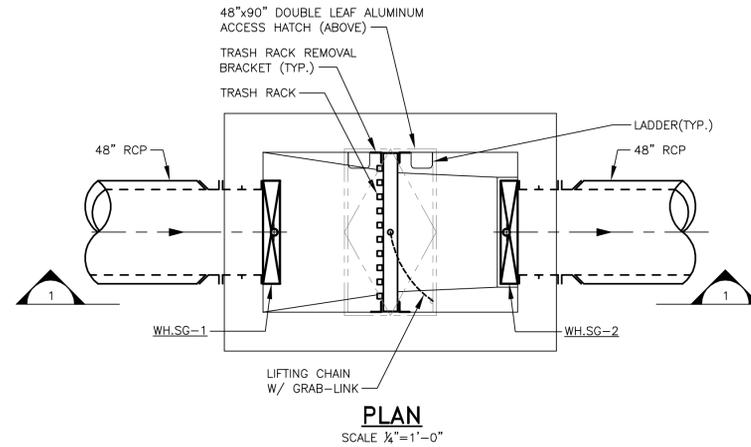
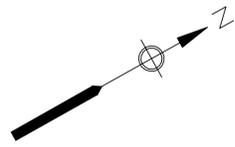
in association with  
**BLACK & VEATCH**

**90% SUBMITTAL  
NOT FOR  
CONSTRUCTION**

CONTRACT NO. 20XX-XX  
SOUTH HARTFORD CONVEYANCE  
AND STORAGE TUNNEL

CONTRACT 2  
**RETRIEVAL SHAFT  
SECTION AND DETAILS**  
MECHANICAL

PLAN NUMBER  
SHEET NO.  
**231 D-301**



VERTICAL DATUM IS NGVD 29  
HORIZONTAL DATUM IS NAD 83/92

**MDC**  
**The Metropolitan District**  
555 Main Street  
Hartford, Connecticut

REV. NO.	DATE	DRWN	CHKD	REMARKS

FILE NAME: 240\_D-101  
DESIGNED BY: ---  
DRAWN BY: ---  
CHK'D BY: ---  
X-CHK'D BY: ---  
APPROVED BY: J. SULLIVAN  
DATE: FEBRUARY 2015

**90% SUBMITTAL  
NOT FOR  
CONSTRUCTION**

**AECOM** 500 ENTERPRISE DRIVE, SUITE 1A  
ROCKY HILL, CT 06067  
PHONE (860) 263-5800

in association with  
**BLACK & VEATCH**

**CONTRACT NO. 20XX-XX  
SOUTH HARTFORD CONVEYANCE AND  
STORAGE TUNNEL**

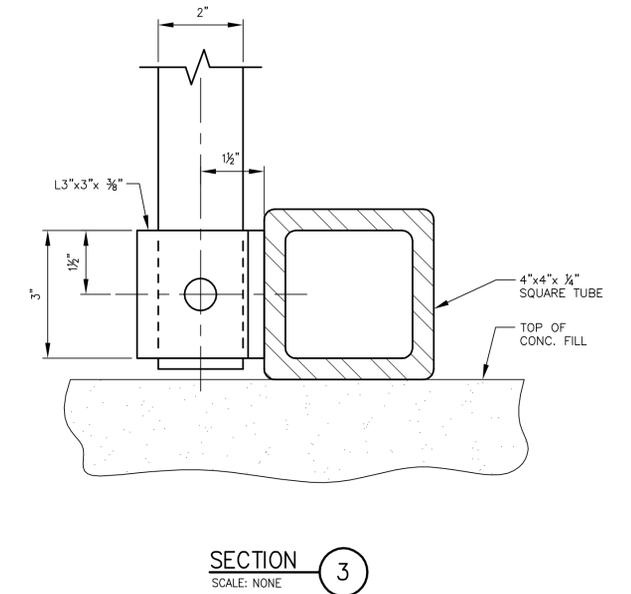
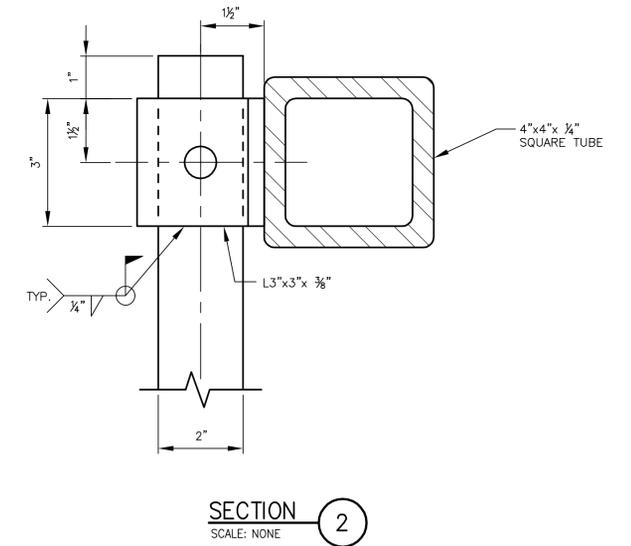
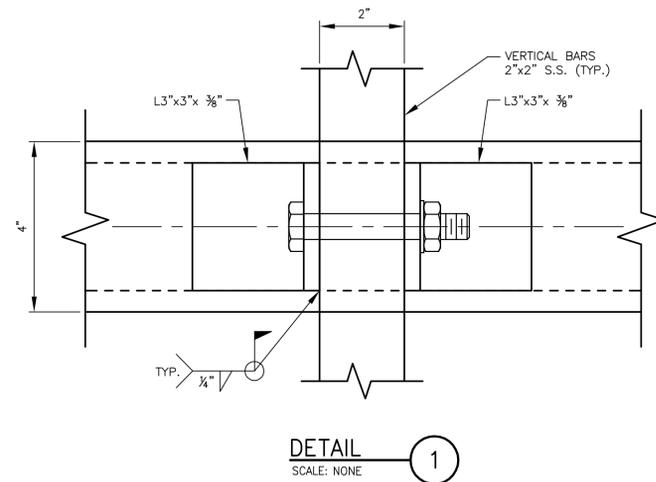
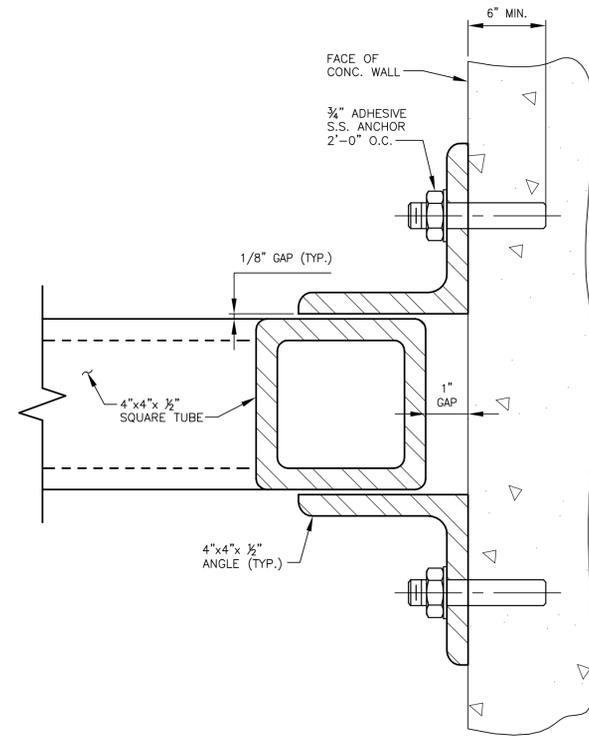
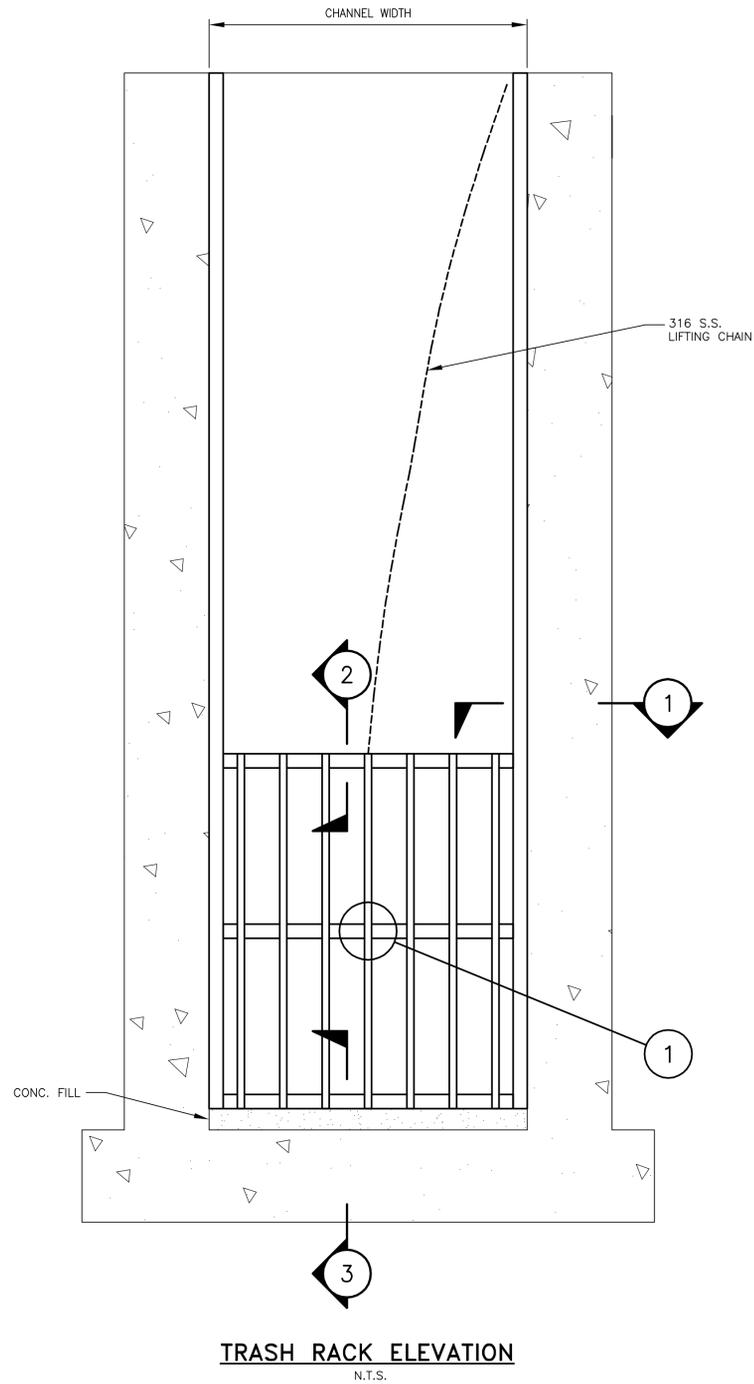
**CONTRACT 2  
WEST HARTFORD INLET  
CONTROL GATE CHAMBER  
MECHANICAL PROCESS**

PLAN NUMBER  
SHEET NO.  
**240 D-101**

**NOTES:**

1. ALL MATERIAL FOR CONSTRUCTION OF THE TRASH RACKS SHALL BE STAINLESS STEEL TYPE 316L. ALL BOLTS TO BE 3/4" DIAMETER. USE TYPE 316 STAINLESS STEEL WASHERS, NUTS AND BOLTS.
2. CONNECTED MEMBERS SHALL BEAR ONLY UPON UNTHREADED PORTIONS OF BOLTS. BURNING OF HOLES IS NOT ALLOWED. BOLT HOLES SHALL BE 1/16" LARGER IN DIAMETER THAN NOMINAL SIZE OF BOLT USED. UNLESS NOTED OTHERWISE, ANCHOR BOLT HOLES SHALL BE 1/8" LARGER IN DIAMETER THAN NOMINAL SIZE OF BOLT USED.
3. END CAPS ARE NOT REQUIRED FOR SQUARE TUBE MEMBERS.

LOCATION	CHANNEL WIDTH	TRASH RACK WIDTH	BAR SPACING (CENTERLINE)	RACK HEIGHT	VERTICAL SPACES	VERTICAL SPACING
WEST HARTFORD INLET CONTROL GATE CHAMBER	7'-6"	7'-4"	12"	8'-0"	2	4'-0"



VERTICAL DATUM IS NGVD 29  
HORIZONTAL DATUM IS NAD 83/92

REV. NO.	DATE	DRWN	CHKD	REMARKS

FILE NAME: 000\_D-004  
DESIGNED BY: ---  
DRAWN BY: ---  
CHK'D BY: ---  
X-CHK'D BY: ---  
APPROVED BY: J. SULLIVAN  
DATE: FEBRUARY 2015

**90% SUBMITTAL  
NOT FOR  
CONSTRUCTION**



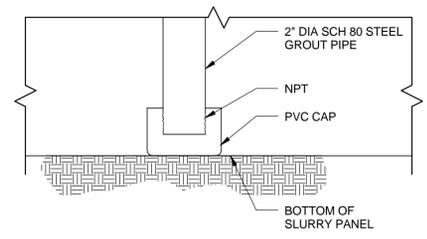
500 ENTERPRISE DRIVE, SUITE 1A  
ROCKY HILL, CT 06867  
PHONE (860) 263-5800

in association with  
**BLACK & VEATCH**

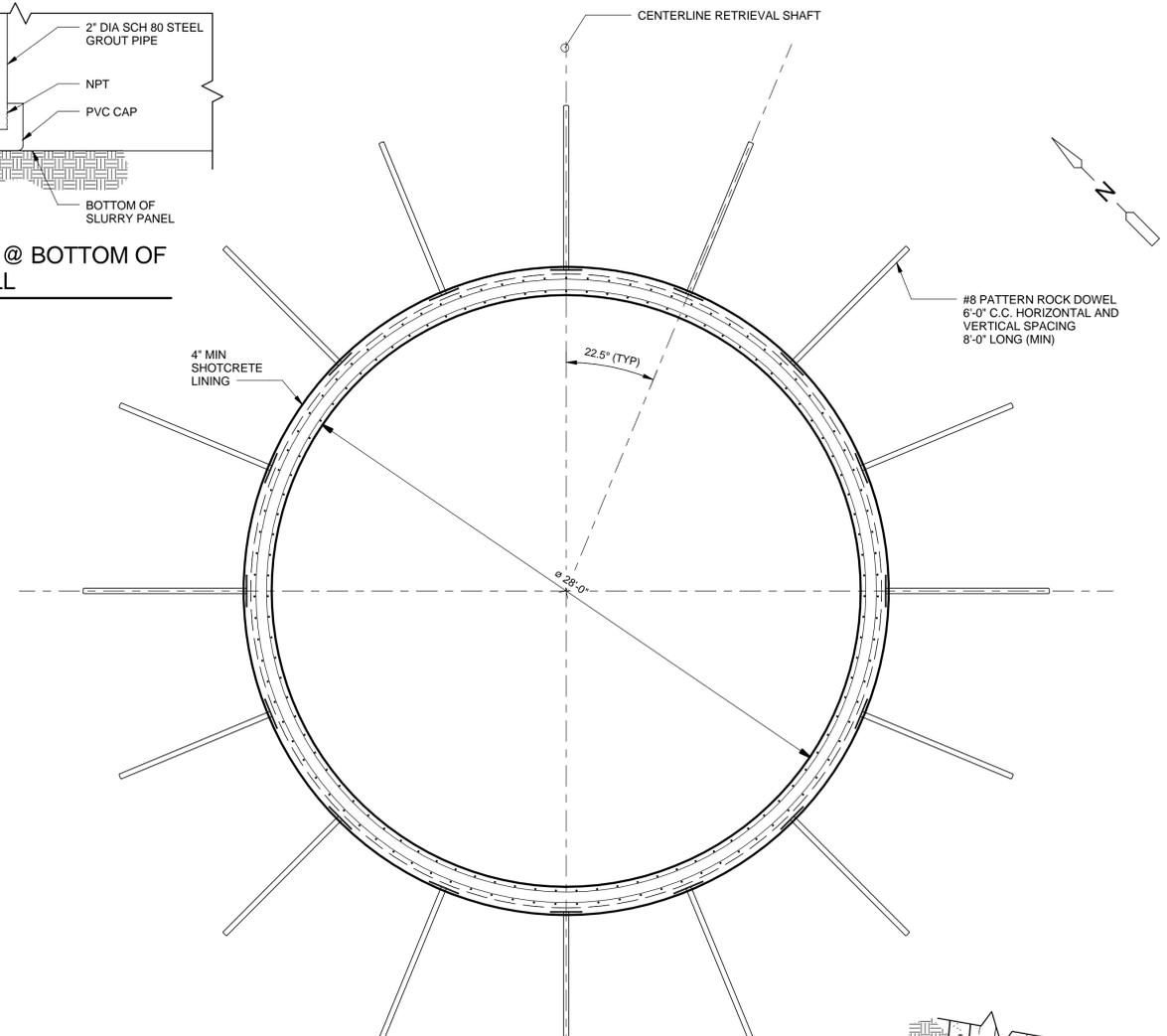
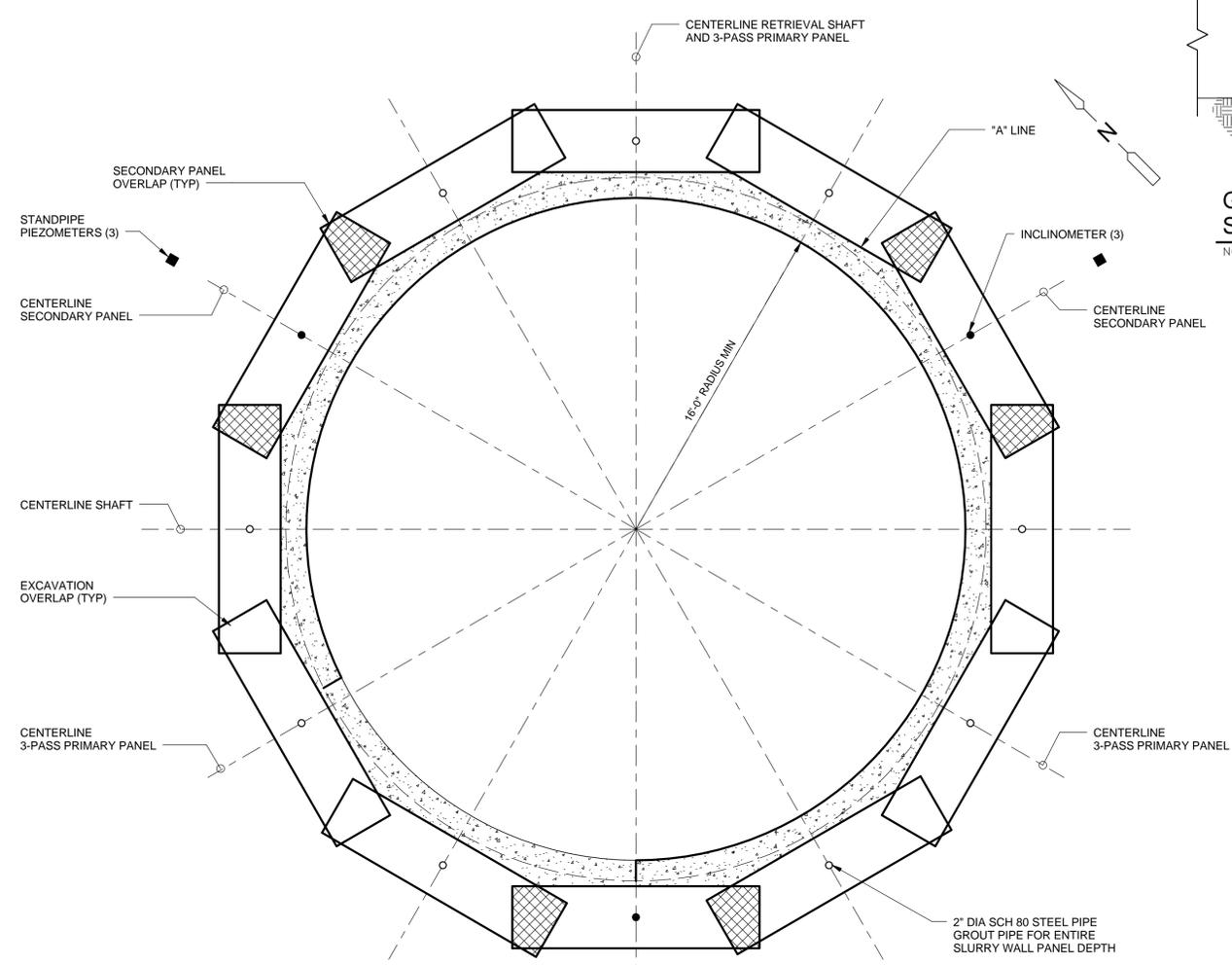
**CONTRACT NO. 20XX-XX  
SOUTH HARTFORD CONVEYANCE AND  
STORAGE TUNNEL**

**CONTRACT 2  
TRASH RACK DETAIL  
MECHANICAL PROCESS**

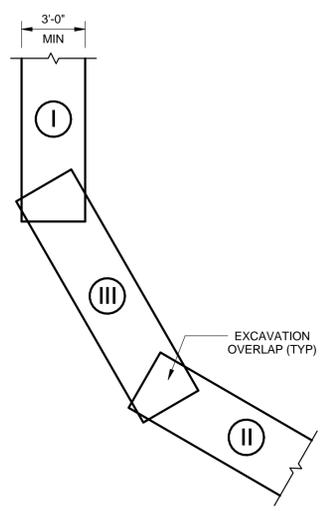
PLAN NUMBER  
SHEET NO.  
**299 D-101**



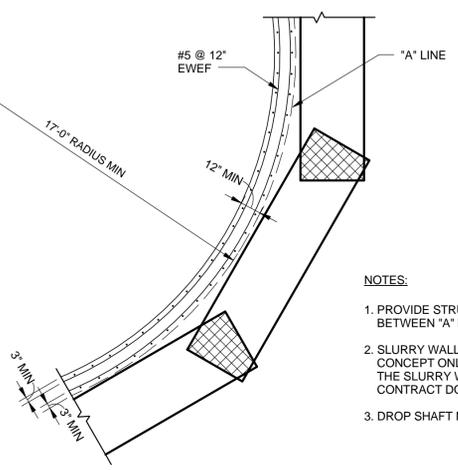
**GRROUT PIPE @ BOTTOM OF SLURRY WALL**  
NO SCALE



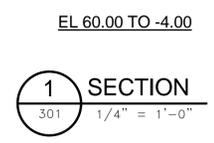
**GRROUT PIPE @ BOTTOM OF SLURRY WALL**  
NO SCALE



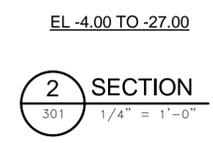
**TYPICAL 3-PASS PRIMARY PANEL**  
1/4" = 1'-0"



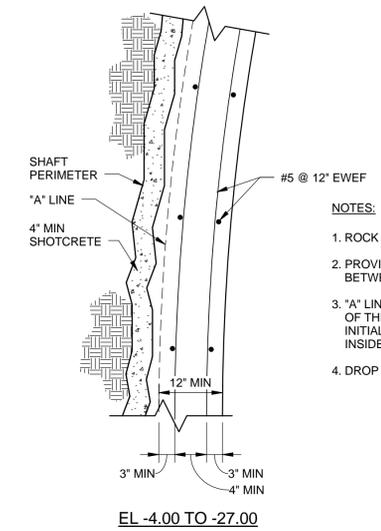
**TYPICAL SECONDARY PANEL**  
1/4" = 1'-0"



**SECTION 1**  
1/4" = 1'-0"



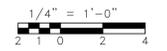
**SECTION 2**  
1/4" = 1'-0"



**ROCK SECTION WALL DETAIL**  
NOT TO SCALE

- NOTES:**
1. ROCK DOWELS NOT SHOWN FOR CLARITY.
  2. PROVIDE STRUCTURAL CONCRETE IN GAP BETWEEN 'A' LINE AND SHOTCRETE.
  3. 'A' LINE ESTABLISHES THE MINIMUM THICKNESS OF THE CAST-IN-PLACE LINING, SOIL, ROCK, OR INITIAL SUPPORT ELEMENTS SHALL NOT PROTRUDE INSIDE THE 'A' LINE.
  4. DROP SHAFT NOT SHOWN.

- NOTES:**
1. PROVIDE STRUCTURAL CONCRETE IN GAP BETWEEN 'A' LINE AND SLURRY WALL.
  2. SLURRY WALL SOCKETED IN ROCK SHOWN IS A CONCEPT ONLY. CONTRACTOR SHALL DESIGN THE SLURRY WALL IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
  3. DROP SHAFT NOT SHOWN.



VERTICAL DATUM IS NGVD 29  
HORIZONTAL DATUM IS NAD 83/92

**MDC**  
**The Metropolitan District**  
555 Main Street  
Hartford, Connecticut

REV. NO.	DATE	DRWN	CHKD	REMARKS

FILE NAME: \_\_\_\_\_  
DESIGNED BY: CEH  
DRAWN BY: CTH  
CHK'D BY: ME  
X-CHK'D BY: KC  
APPROVED BY: \_\_\_\_\_  
DATE: FEBRUARY 2015

**90% SUBMITTAL  
NOT FOR  
CONSTRUCTION**

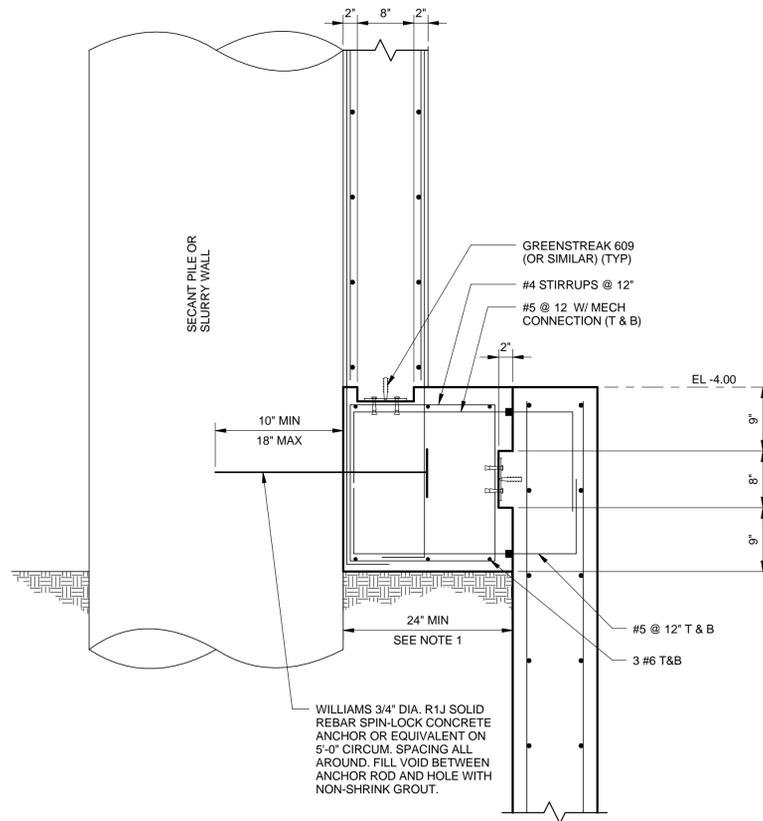
**AECOM** 500 ENTERPRISE DRIVE, SUITE 1A  
ROCKY HILL, CT 06067  
PHONE (860) 263-5800

in association with  
**BLACK & VEATCH**

**CONTRACT NO. 20XX-XX**  
**SOUTH HARTFORD CONVEYANCE  
AND STORAGE TUNNEL**

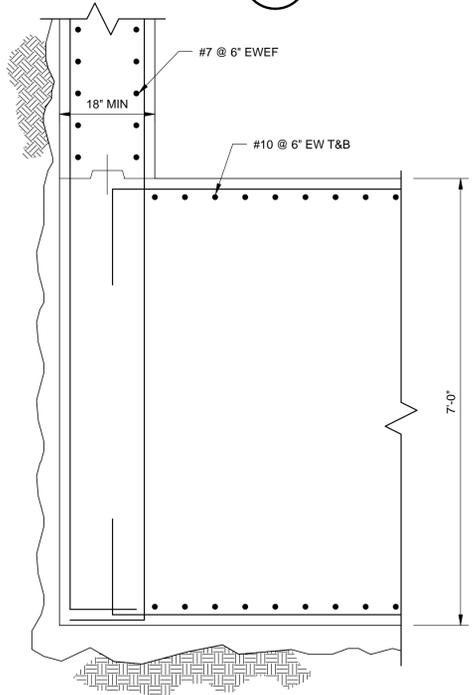
**CONTRACT 2**  
**RETRIEVAL SHAFT**  
**PLANS**  
**STRUCTURAL**

PLAN NUMBER  
SHEET NO.  
**203 S-101**

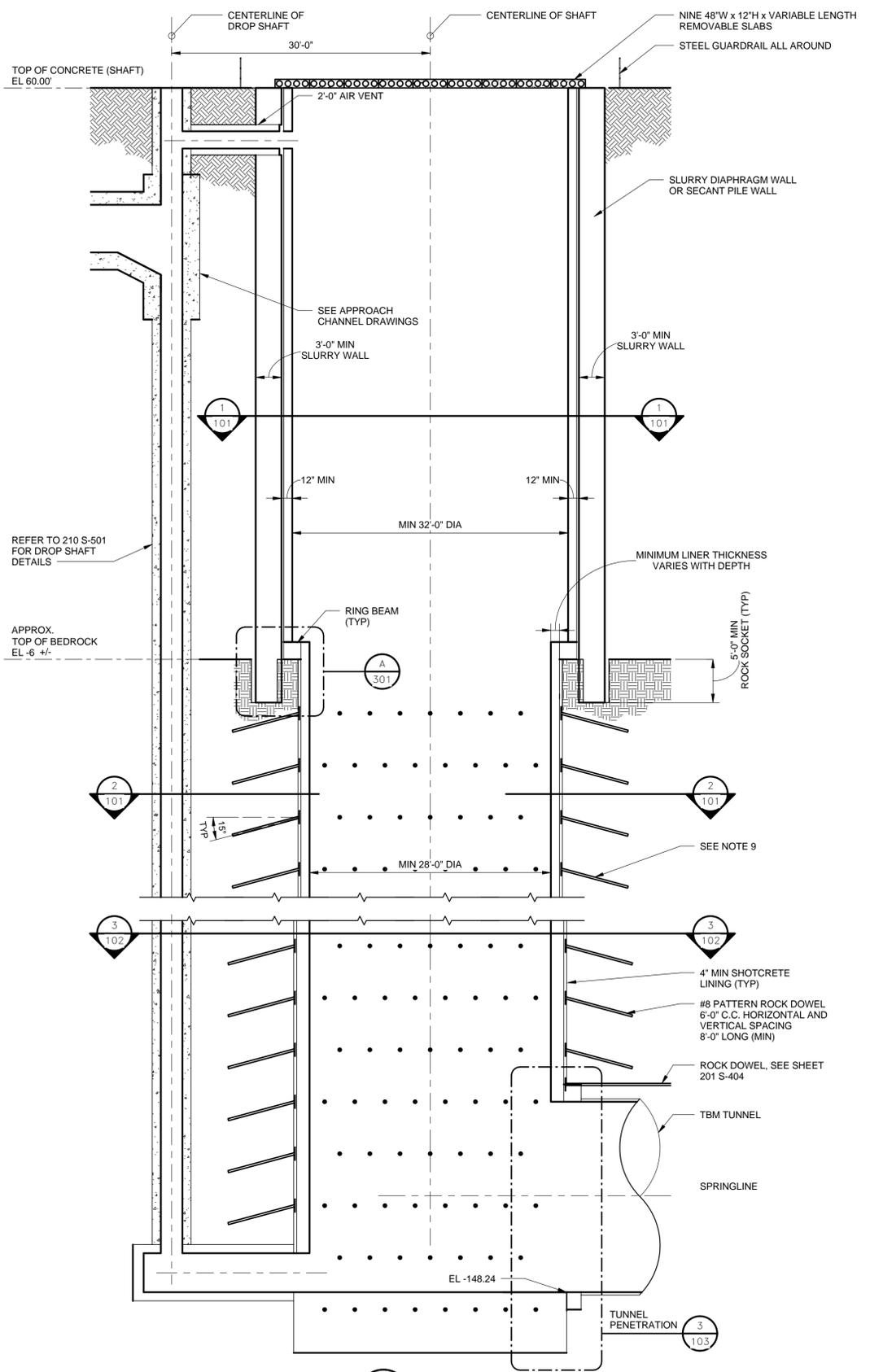


NOTES:  
 1. RING BEAM WIDTH WILL VARY BASED ON CONFIGURATION OF SECANT PILE WALL OR SLURRY WALL. MINIMUM THICKNESS SHALL BE 24 INCHES.

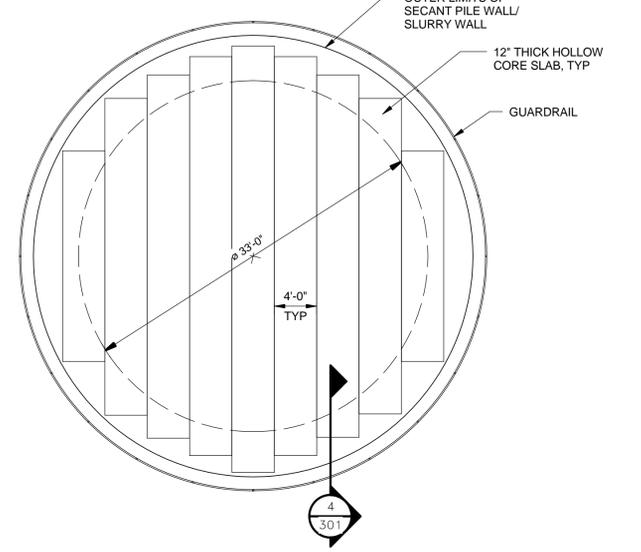
**A RING BEAM**  
 301 1" = 1'-0"



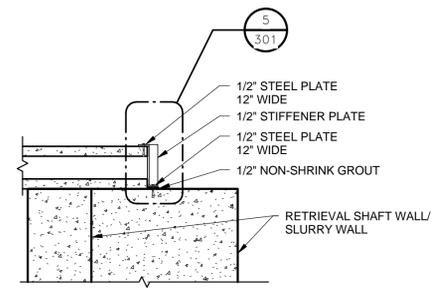
**BASE SLAB DETAIL**  
 3/4" = 1'-0"



**1 SECTION**  
 1/8" = 1'-0"



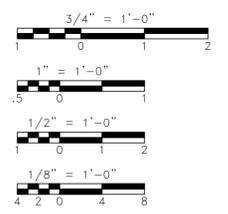
**REMOVABLE SLAB PLAN**  
 1/8" = 1'-0"



**4 SECTION**  
 301 1/2" = 1'-0"

**5 DETAIL A/301**  
 1 1/2" = 1'-0"

- NOTES:
- CONTRACTOR SHALL EMPLOY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF CONNECTICUT TO DESIGN THE INITIAL SUPPORT OF THE SHAFT.
  - IF SELECTED, SLURRY WALLS SHALL HAVE A MINIMUM THICKNESS OF 36 INCHES AND INCLUDE CONCRETE WITH A MINIMUM 28 DAY STRENGTH OF 4,500 PSI. REINFORCING STEEL IN THE SLURRY WALL SHALL BE DESIGNED BY THE CONTRACTOR'S ENGINEER. SLURRY WALL JOINTS AND PANEL LENGTH SHALL BE DESIGNED BY THE CONTRACTOR'S ENGINEER. SLURRY WALL SHALL BE SOCKETTED TO AN ELEVATION OF -11.00+/- OR FIVE FEET INTO COMPETENT BEDROCK WHICHEVER IS THE LOWEST ELEVATION. THE ELEVATION OF THE SOIL/ROCK INTERFACE IS AN APPROXIMATION. THE SLURRY WALL BASE ELEVATION SHALL BE ADJUSTED BASED ON CONDITIONS ACTUALLY ENCOUNTERED. CONTRACTOR SHALL ACCOUNT FOR FIVE FEET BEDROCK ELEVATION VARIATION OVER THE SHAFT CIRCUMFERENCE. CONSTRUCT RING BEAM AT ELEVATION INDICATED REGARDLESS OF ACTUAL BEDROCK ELEVATION.
  - CONTRACTOR SHALL DESIGN THE SLURRY WALL IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
  - CONTRACTOR SHALL CONSTRUCT RING BEAM AT SOIL/ROCK INTERFACE IMMEDIATELY AFTER COMPLETION OF SOIL EXCAVATION. CONTRACTOR SHALL CONSTRUCT CONCRETE WALL INSIDE OF SLURRY WALL IMMEDIATELY AFTER CONSTRUCTION OF RING BEAM.
  - IF SECANT PILES ARE SELECTED, SEE ADDITIONAL NOTES ON SHEET 202 S-301.
  - CONTRACTOR SHALL CONSTRUCT CONCRETE LINING TO EL -118.00 BEFORE EXCAVATING THE SHAFT TO TUNNEL GRADE.
  - SPOT ROCK DOWELS SHALL BE PROVIDED AS NEEDED TO STABILIZE ROCK WEDGES IN ADDITION TO THE PATTERN ROCK DOWELS.
  - PERMISSIBLE BLASTING HOURS ARE DICTATED BY LOCAL ORDINANCES.
  - DOWEL ORIENTATION CAN BE MODIFIED IN ACCORDANCE WITH BEDDING PLANES.



VERTICAL DATUM IS NGVD 29  
 HORIZONTAL DATUM IS NAD 83/92

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FILE NAME: \_\_\_\_\_  
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 DRAWN BY: CTH  
 CHK'D BY: ME  
 X-CHK'D BY: KC  
 APPROVED BY: \_\_\_\_\_  
 DATE: FEBRUARY 2015

**AECOM** 500 ENTERPRISE DRIVE, SUITE 1A  
 ROCKY HILL, CT 06067  
 PHONE (860) 263-5800

in association with  
**BLACK & VEATCH**

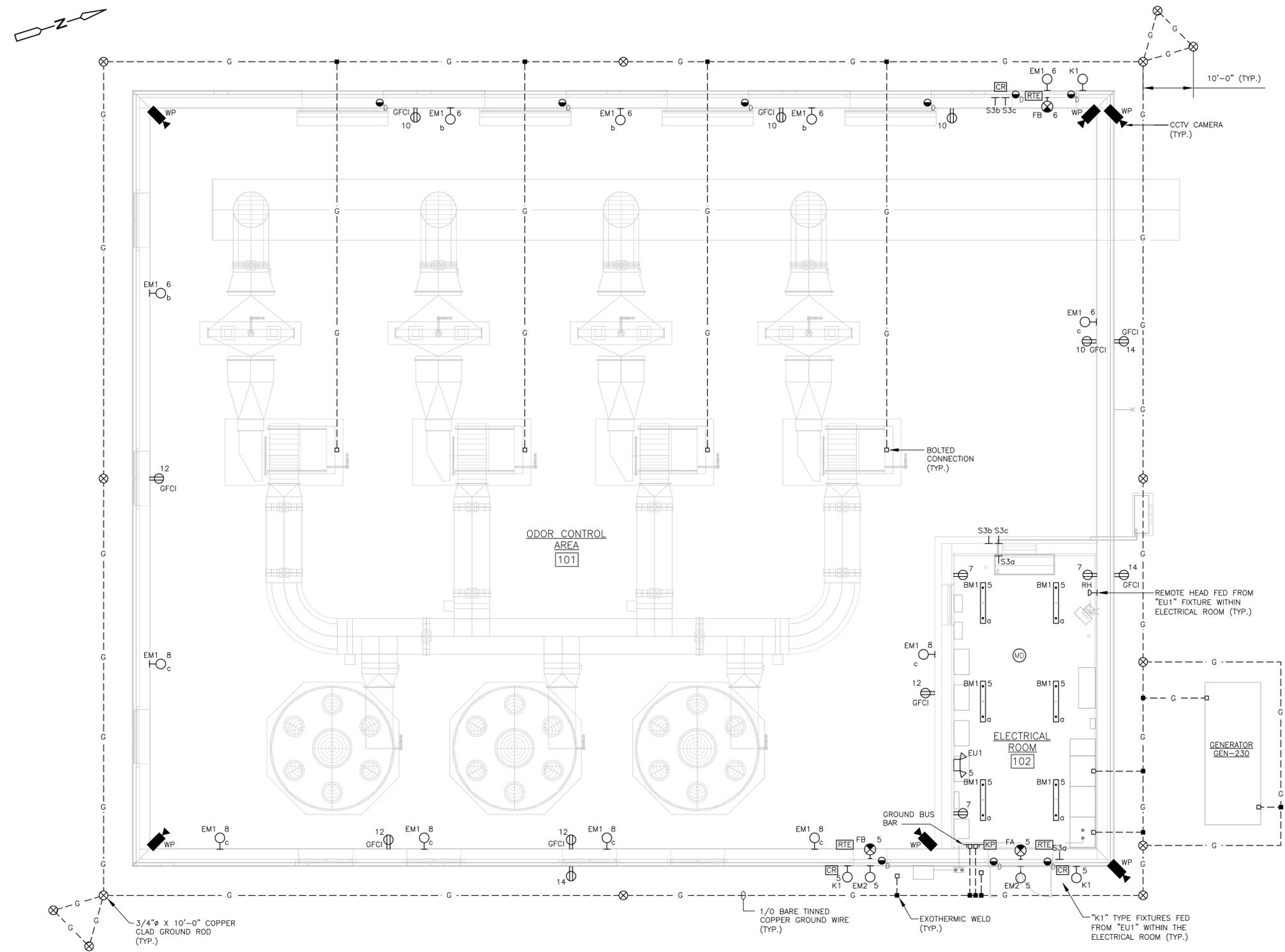
**90% SUBMITTAL NOT FOR CONSTRUCTION**

CONTRACT NO. 20XX-XX  
 SOUTH HARTFORD CONVEYANCE AND STORAGE TUNNEL

CONTRACT 2  
 RETRIEVAL SHAFT  
 SECTION  
 STRUCTURAL

PLAN NUMBER  
 SHEET NO.  
 203 S-301

NOTES:  
 1. FOR LEGEND, SYMBOLS AND GENERAL NOTES SEE SHEET 00 E-001.



**RETRIEVAL SHAFT  
 ODOR CONTROL FACILITY  
 SYSTEMS PLAN**  
 SCALE: 3/16" = 1'-0"



VERTICAL DATUM IS NGVD 29  
 HORIZONTAL DATUM IS NAD 83/92

**MDC**  
**The Metropolitan District**  
 555 Main Street  
 Hartford, Connecticut

REV. NO.	DATE	DRWN	CHKD	REMARKS

FILE NAME: 230 E-104  
 DESIGNED BY: D. ASPESI  
 DRAWN BY: D. ASPESI  
 CHK'D BY: Y. RIZK  
 X-CHK'D BY: --  
 APPROVED BY: J. SULLIVAN  
 DATE: FEBRUARY 2015

**90% SUBMITTAL  
 NOT FOR  
 CONSTRUCTION**

**AECOM** 500 ENTERPRISE DRIVE, SUITE 1A  
 ROCKY HILL, CT 06067  
 PHONE (860) 263-5800

in association with  
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**CONTRACT NO. 20XX-XX  
 SOUTH HARTFORD CONVEYANCE AND  
 STORAGE TUNNEL**

**CONTRACT 2  
 RETRIEVAL SHAFT AND WEST HARTFORD  
 CONDUIT SYSTEMS PLAN**

ELECTRICAL

PLAN NUMBER  
 SHEET NO.  
**230 E-104**

LUMINAIRE SCHEDULE							
LUMINAIRE TYPE	MTG	LAMP		VOLTAGE	MANUFACTURER AND BASE MODEL NUMBER		REMARKS AND OPTIONS
		TYPE	WATTS				
BM1	PEND	FLUOR.	2-32	120	HOLOPHANE SERIES CONTROLUME	OR EQUAL	LUMINAIRE 4'-0" UV STABILIZED POLYCARBONATE HOUSING, UV STABILIZED POLYCARBONATE LENS, SPREAD LIGHT DISTRIBUTION, GENERAL ELECTRONIC BALLAST, WET LOCATION LISTED.
EM1	WALL	LED	70	120	LITHONIA SERIES CSXW	OR EQUAL	WALL LUMINAIRE, DIE CAST ALUMINUM HOUSING, ALUMINUM REFLECTOR, ACRYLIC LENS, -40°C TO 40°C AMBIENT RATED, LED'S MOUNTED TO CORE CIRCUIT BOARD, 0-10V DIMMING, HIGH EFFICIENCY DRIVER, 4000K LED'S, THERMOSET POWDER COAT PAINT, DARK BRONZE FINISH, BUG RATING OF 2-0-2 (DARK SKY COMPLIANT), MINIMUM CRI OF 70, WET LOCATION.
EM2	WALL	LED	70	120	LITHONIA SERIES CSXW	OR EQUAL	WALL LUMINAIRE, DIE CAST ALUMINUM HOUSING, ALUMINUM REFLECTOR, ACRYLIC LENS, -40°C TO 40°C AMBIENT RATED, LED'S MOUNTED TO CORE CIRCUIT BOARD, 0-10V DIMMING, HIGH EFFICIENCY DRIVER, 4000K LED'S, THERMOSET POWDER COAT PAINT, DARK BRONZE FINISH, BUG RATING OF 2-0-2 (DARK SKY COMPLIANT), MINIMUM CRI OF 70, PHOTOCELL, WET LOCATION.
EU1	WALL	KRYPTON	2-9	120	LITHONIA SERIES ELM 6-12	OR EQUAL	EMERGENCY LUMINAIRE, WHITE UV STABLE THERMOPLASTIC HOUSING, EQUIPPED WITH 12V, 54 WATT NICKEL CADMIUM BATTERY, 2-9 WATT KRYPTON HEADS, TEST SWITCH, SELF-DIAGNOSTICS, DAMP LOCATION LISTED.
FA	PEND/WALL	LED	-	120	LITHONIA SERIES SOLO	OR EQUAL	EXIT SIGN, INJECTION-MOLDED ACRYLIC ENCLOSURE, SINGLE FACE, RED LETTERS, WHITE BACKGROUND, NICKEL-CADIUM BATTERY, SELF DIAGNOSTICS WITH AUDIBLE ALARM, NEMA 1.
FB	PEND/WALL	LED	-	120	EMERGI-LITE SERIES SURVIVE-ALL	OR EQUAL	EXIT SIGN, POLYVINYL CHLORIDE ENCLOSURE (GREY COLOR), SINGLE FACE, RED LETTERS, GRAY BACKGROUND, NICKEL-CADIUM BATTERY, SELF DIAGNOSTICS, NEMA-4X.
K1	WALL	HALOGEN	12	-	LITHONIA ELA NX	OR EQUAL	EMERGENCY LUMINAIRE WEATHER-RESISTANT, LED REMOTE HEAD, 12 WATT, WET LOCATION.

EMERGENCY FIXTURES

EQUIPMENT GROUNDING SCHEDULE			
PROVIDE GROUNDING CONDUITS AND WIRES INDICATED FROM EQUIPMENT LISTED TO THE GROUNDING LOOP OR TO THE GROUNDING BUS BARS AS INDICATED AND IN ACCORDANCE WITH THE CONDUIT AND WIRE SCHEDULE. FOR GROUNDING OF PIPING AND OTHER MISCELLANEOUS ITEMS PROVIDE COMPLETE GROUNDING SYSTEM IN ACCORDANCE WITH THE REQUIREMENTS OF THE LOCAL REGULATIONS.			
EQUIPMENT	GROUNDING CONDUIT AND WIRE	QUANTITY	NOTES
100 AMPS DISTRIBUTION PANEL	[G3]	ONE	TO GROUNDING BUS BAR
30 KVA DRY TYPE TRANSFORMER	[G4]	ONE	TO GROUNDING BUS BAR
UTILITY PAD MOUNTED TRANSFORMER	[G11]	TWO	TO GROUNDING LOOP
50 HP TO LESS THAN 100 HP VFD UNIT	[G4]	ONE	TO GROUNDING BUS BAR
PLC CONTROL PANELS	[G3]	ONE	TO GROUNDING BUS BAR
SWITCHBOARD SWB0-1	[G7]	TWO	TO GROUNDING BUS BAR
480 VAC EQUIPMENT LOCAL CONTROL PANELS	[G2]	ONE	TO GROUNDING BUS BAR
GENERATOR ENCLOSURE	[G7]	TWO	TO GROUNDING LOOP
ANY STEEL TANK	[G4]	TWO	RUN CONDUIT TO THE GROUNDING LOOP OR TO THE NEAREST GROUND BUS BAR.
GROUND BUS BAR	[G7]	TWO	TO GROUNDING LOOP
ANTENNA	[G4]	ONE	TO GROUND ROD

AREA CLASSIFICATION SCHEDULE							
LOCATION	NEMA TYPE						
	1	3	4	4X	12	NEMA 7	
						CLASS 1 DIV 1	CLASS 1 DIV 2
ELECTRICAL ROOM [101]	X						
ODOR CONTROL AREA [102]							X (R1)
OUTDOORS				X			
INLET CONTROL GATE CHAMBER							
VAULT INTERIOR						X (R2)	X (R2)
WHCP DIVERSION STRUCTURE (CTS3)							
VAULT INTERIOR						X (R2)	X (R2)
TUNNEL RETRIEVAL SHAFT							
VAULT INTERIOR						X (R2)	X (R2)

REMARKS

R1 - AREAS WITHIN 3'-0" OF LEAKAGE SOURCES SUCH AS FANS, DAMPERS, FLEXIBLE CONNECTIONS, FLANGES, PRESSURIZED UNWELDED DUCTWORK AND ODOR CONTROL VESSELS. REFER TO ODOR CONTROL CLASSIFICATION DETAIL FOR FURTHER DETAILS.

R2 - CLASS 1, DIV 1 WITHIN VAULT/SHAFT. CLASS 1, DIV 2 WITHIN RADIUS. REFER TO VAULT/SHAFT CLASSIFICATION DETAIL FOR EXTENT OF CLASS 1, DIV 2 BOUNDARY.

CONDUIT AND WIRING SCHEDULE

POWER WIRING:

- [PA] 3/4"C, 2-12 AWG, 1-12 AWG (G)
- [PB] 3/4"C, 3-12 AWG, 1-12 AWG (G)
- [PC] 3/4"C, 3-10 AWG, 1-10 AWG (G)
- [PD] 3/4"C, 3-8 AWG, 1-10 AWG (G)
- [PE] 3/4"C, 3-6 AWG, 1-10 AWG (G)
- [PF] 1"C, 3-4 AWG, 1-10 AWG (G)
- [PG] 1"C, 3-4 AWG, 1-8 AWG (G)
- [PH] 1 1/4"C, 3-2 AWG, 1-8 AWG (G)
- [PJ] 1 1/2"C, 3-1 AWG, 1-8 AWG (G)
- [PJ-4] 1 1/2"C, 4-1 AWG, 1-8 AWG (G)
- [PK] 1 1/2"C, 3-1 AWG, 1-6 AWG (G)
- [PK-4] 1 1/2"C, 4-1 AWG, 1-6 AWG (G)
- [PL] 1 1/2"C, 3-1/0 AWG, 1-6 AWG (G)
- [PX] TWO SETS OF 4"C, 3-350 KCM, 1-1 AWG (G)
- [PX-4] TWP SETS OF 4"C, 4-350 KCM, 1-1 AWG (G)

NOTE: ALL CONDUIT SIZING BASED ON THWN/THHN TYPE CABLE.

DISCRETE WIRING:

- [D2] 1/2"C, 2-14 AWG, 1-14 AWG (G)
- [D4] 1/2"C, 4-14 AWG, 1-14 AWG (G)
- [D6] 1/2"C, 6-14 AWG, 1-14 AWG (G)
- [D8] 1/2"C, 8-14 AWG, 1-14 AWG (G)
- [D10] 1/2"C, 10-14 AWG, 1-14 AWG (G)
- [D12] 3/4"C, 12-14 AWG, 1-14 AWG (G)
- [D14] 3/4"C, 14-14 AWG, 1-14 AWG (G)
- [D16] 3/4"C, 16-14 AWG, 1-14 AWG (G)
- [D18] 3/4"C, 18-14 AWG, 1-14 AWG (G)
- [D20] 3/4"C, 20-14 AWG, 1-14 AWG (G)
- [D30] 1"C, 30-14 AWG, 1-14 AWG (G)
- [D40] 1 1/2"C, 40-14 AWG, 1-14 AWG (G)

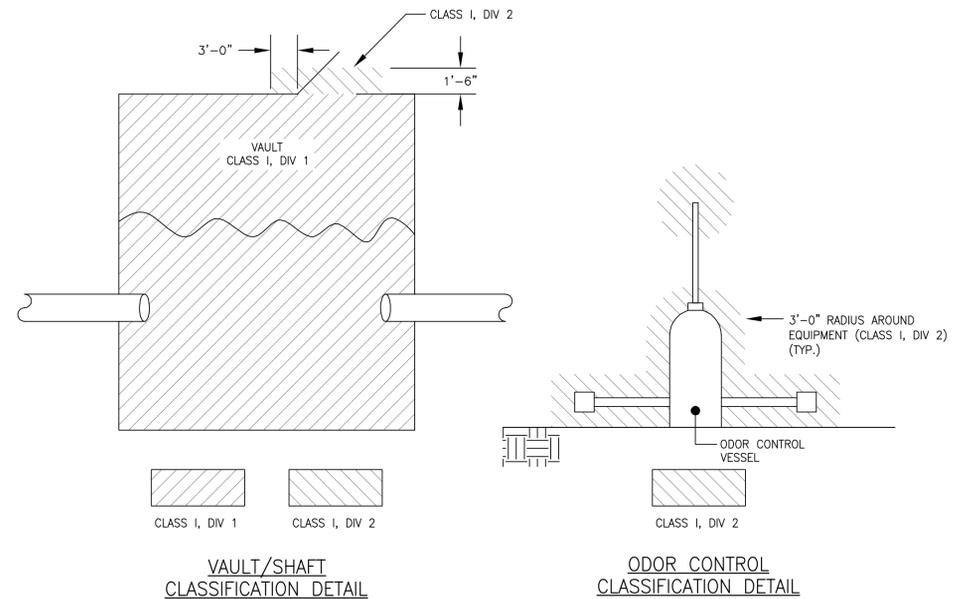
SIGNAL WIRING:

- [C] 1"C, VENDOR SUPPLIED CABLE
- [C1] 3/4"C, 1-TSP 16 AWG
- [C2] 1"C, 2-TSP 16 AWG
- [C3] 1"C, 3-TSP 16 AWG
- [C4] 1 1/2"C, 4-TSP 16 AWG
- [C5] 1 1/2"C, 5-TSP 16 AWG
- [C6] 1 1/2"C, 6-TSP 16 AWG

GROUND WIRING:

NOTE: ALL G SERIES WIRING SHALL BE CONNECTED TO GROUNDING BUS BAR LOCATED IN THE ELECTRICAL ROOM UNLESS OTHERWISE INDICATED. INSTALL IN PVC CONDUIT.

- [G1] 1/2"C, 1-12 AWG (G)
- [G2] 1/2"C, 1-10 AWG (G)
- [G3] 1/2"C, 1-8 AWG (G)
- [G4] 3/4"C, 1-6 AWG (G)
- [G5] 1"C, 1-4 AWG (G)
- [G6] 1"C, 1-2 AWG (G)
- [G7] 1"C, 1-1/0 AWG (G)
- [G8] 1"C, 1-2/0 AWG (G)
- [G9] 1 1/2"C, 1-3/0 AWG (G)
- [G10] 1 1/2"C, 1-4/0 AWG (G)
- [G11] 1 1/2"C, 1-250 KCM (G)
- [G12] 2"C, 1-350 KCM (G)
- [G13] 2"C, 1-500 KCM (G)



VERTICAL DATUM IS NGVD 29  
HORIZONTAL DATUM IS NAD 83/92

REV. NO.	DATE	DRWN	CHKD	REMARKS

FILE NAME: 230 E-601  
DESIGNED BY: D. ASPESI  
DRAWN BY: D. ASPESI  
CHK'D BY: Y. RIZK  
X-CHK'D BY: --  
APPROVED BY: J. SULLIVAN  
DATE: FEBRUARY 2015

90% SUBMITTAL NOT FOR CONSTRUCTION

**AECOM** 500 ENTERPRISE DRIVE, SUITE 1A  
ROCKY HILL, CT 06067  
PHONE (860) 263-5800

in association with **BLACK & VEATCH**

CONTRACT NO. 20XX-XX  
SOUTH HARTFORD CONVEYANCE AND STORAGE TUNNEL

CONTRACT 2  
MISCELLANEOUS SCHEDULES  
ELECTRICAL

PLAN NUMBER  
SHEET NO.  
230 E-601



July 17, 2015

Mayor Scott Slifka and Honorable Members of the West Hartford Town Council  
Town of West Hartford  
Town Hall  
50 South Main Street  
West Hartford, Connecticut 06107

Re: Special Development District and Zone Change Request Application #144  
Metropolitan District Commission (MDC) in conjunction with the South Hartford  
Conveyance and Storage Tunnel Project.  
**Supplemental Project Information and Request**

Dear Mayor Slifka and Honorable Members of the Town Council:

This letter provides supplemental information and a modification request per the Town's comments (received on July 10, 2015) for the Special Development District (SDD) Application #144. SDD #144 requested a change of zone from RM-3 to IR and Special Development Designation for Property fronting on Talcott Road (1 Charter Oak Boulevard), West Hartford.

### **TRAFFIC AND PARKING CONSIDERATIONS (UPDATED)**

The proposed Facility will be unmanned, with only periodic visits for routine maintenance and site checks. Therefore, there will be minimal parking needs and no net increase in traffic to and from the site. Four striped parking spaces are provided.

During construction, the truck traffic would likely result in a truck every 10-15 minutes during the peak period. This is not anticipated to have any impact on traffic flow in the area. During operation of the facility, one MDC maintenance vehicle per week is anticipated. Once every 10-15 years, the tunnel will require a tunnel cleaning operation that will be staged at this location. This would require more vehicles during the limited days of the cleaning operation, currently estimated to be 30-40 vehicles/day and the cleaning could take several weeks.

During construction, the contractor will be prohibited from having construction trucks use Quaker Lane South. All heavy construction trucks/trailers would use New Park Ave. Also, the cleaning operation discussed above (every 10-15 years) would be an outside contract and those heavy vehicles would also be restricted from using Quaker Lane South. The typical MDC maintenance vehicle is an SUV or pickup truck. The predominant egress path is New Park Ave; however, we request that these small MDC maintenance vehicles be allowed to use Quaker Lane South if that allows the MDC to more expediently get to their next service call.

The Metropolitan District 

## **TRASH MANAGEMENT**

The proposed Facility will generate very little trash on a day-to-day basis. Most maintenance activities or landscape maintenance activities will occur with any refuse generated being removed from the site at the completion of each activity. Inside the air treatment enclosure, there will likely be a small covered MDC trash receptacle. This will be behind a locked door. Any trash deposited by MDC staff will be periodically removed.

## **SUMMARY OF OUTREACH EFFORTS (UPDATED)**

A neighborhood public meeting was held on Thursday, April 30, 2015, at 6:30 P.M., at the Elmwood Community Center, located at 1106 New Britain Avenue in West Hartford, CT. Approximately 180 residents and business owners adjacent to the Talcott Road site were mailed an invitation to attend this meeting. At the meeting, a technical presentation was given to explain the South Tunnel Project in more detail, describe in greater detail structures that are anticipated to be constructed in this area, describe the local regulatory process that the MDC will follow, and to obtain feedback from the public adjacent to aspects of the project. All attendees were given ample opportunity to speak. They asked questions looking for more technical explanation about the project. They did not indicate any objection to what was presented or proposed.

To-date, the Applicant has held four public meetings with the Design Review Advisory Committee, where details of the proposed project were presented and discussed. These meetings were open to the public, and were held on 1/22/15, 4/2/15, 6/11/15 and 7/9/15.

On July 2, 2015 the MDC distributed by mail a seven-page technical handout to 181 residents and property owners adjacent to the Talcott Road site. This handout included more detailed project information for those residents who had not been able to attend previous meetings.

An additional neighborhood public meeting was held on Wednesday, July 15, 2015, at 5:00 P.M., at the Elmwood Community Center, located at 1106 New Britain Avenue in West Hartford, CT. Approximately 24 residents adjacent to the Talcott Road site were hand delivered an invitation to attend this meeting and six people attended. At the meeting a technical presentation was given to explain the South Tunnel Project in more detail, describe in greater detail structures that are anticipated to be constructed in this area, describe the local regulatory process that the MDC will follow, and to obtain feedback from the public adjacent to aspects of the project. All attendees were given ample opportunity to speak.

**REQUEST FOR MODIFICATION TO SECTION 177-20 OBSTRUCTIONS IN YARDS**

The Applicant is requesting a Special Development District (SDD) modification to Section 177-20 Obstructions in yards (Part C, and Part D(1)). The final design for the proposed Facility at Talcott Road includes an 8-ft decorative industrial steel perimeter fence. As such, the proposed site fencing exceeds the permitted fence height in the rear and side yards by 1-ft, and the front yard by 4-ft. This fence is predominantly set back from Talcott Road with significant landscaping between Talcott Road and the fence.

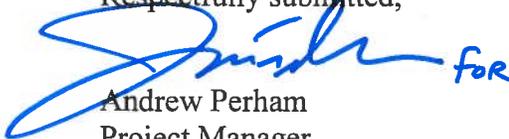
This Tunnel Access Shaft and Air Treatment Facility is a significant component of the South Tunnel project, and therefore its security is of paramount importance to the MDC and the public. The facility is unmanned but will have security systems and security cameras. Considering the potential for vandalism and un-authorized access, the Applicant hereby requests modification to Section 177-20 to allow an 8-ft perimeter fence for the facility at 1 Charter Oak Boulevard.

**FINDINGS (UPDATED)**

The proposed Application is worthy of approval for the following reasons:

1. The change of the underlying zone for the Property from Multifamily Residence District (RM-3) to Restricted Industrial District (IR) is appropriate and consistent with the current land use. This will allow for the construction of an integral component of the South Tunnel project, which will greatly benefit the residents of West Hartford in the form of improved surface water quality.
2. The change of the underlying zone for the Property from Multifamily Residence District (RM-3) to Restricted Industrial District (IR) is appropriate as it will result in an overall improvement in the current site, by way of additional extensively maintained landscaping, aesthetically serene appearance of a low-activity facility, improved green infrastructure by way of elimination of approximately 23,500 SF of paved industrial parking area, increased landscaping buffer between the residents and the industrial area, and reduction in stormwater related impacts to downstream receiving waters.

Respectfully submitted,



Andrew Perham  
Project Manager  
The Metropolitan District

List of Enclosures:

- F) Revised Enclosure F - Design Drawings
- G) Responses to Town Staff Comments

# ENCLOSURE G - Response to Town Staff Comments

DOCUMENT REVIEW COMMENTS			
Job No.: <b>60287608</b>	Title: <b>West Hartford Zone Change/SDD Request</b>	Date: <b>7/16/15</b>	
Preparer: <b>James Sullivan</b>	Reviewer: <b>Town of West Hartford</b>	Responder: <b>Various/Below</b>	
Discipline: <b>MDC South Tunnel - All</b>	Status:	<input type="checkbox"/> Criteria <input type="checkbox"/> 100% <input type="checkbox"/> 90%	<input type="checkbox"/> 60% <input type="checkbox"/> 30% <input checked="" type="checkbox"/> <b>SDD and Zone Change Application</b>
REVIEW PURPOSE:	<input type="checkbox"/> Independent Peer Review <input type="checkbox"/> Discipline <input type="checkbox"/> Project Approach Review	<input type="checkbox"/> Interdiscipline <input checked="" type="checkbox"/> Other	Action Code: <b>A – Agree, will comply</b> <b>D – Delete comment<sup>1</sup></b> <b>E – Exception taken</b>

No.	COMMENT	ACTION/RESPONSE
P-1	The plan set Cover Sheet should be updated as follows: a. The locus map should identify the location of the project site. b. The scale of the locus maps should be increased to a larger scale. Staff suggests 1"=500' and inclusion of areas only in West Hartford. c. The title shall be updated to include reference to "Special Development District and Zone Change Request". Included in the title should be reference to the location of the project site.	A revised index sheet, addressing Comments 1a., 1b., and 1c., has been prepared and is included in the modified plan set (Enclosure F).
P-2	A proposed zoning map should be included in the plan set a. Staff suggests using the existing zoning depicted on Figure 1, page two of the application, and creating a new zoning map in the plan set based off the Acquisition and Easement Map contained in the application. b. The zoning map should include, existing zones, proposed zone change area and depict the proposed SOD overlay boundary around the entire property, building setbacks and the building lines.	A proposed zoning map has been developed and is included in the modified plan set (Enclosure F).
P-3	The plan shall demonstrate compliance with Section 177-6 C Standards for Industrial Districts. More specifically the following items should be addressed or clarified: a. A Zoning Compliance Chart shall be provided for existing and proposed conditions. Floor Area Ratio (F.A.R.), building coverage, building height, yard and screening requirements, and parking were not tabulated nor reported in the plan set. This chart should be included on either sheet 230 C-144 or by creating a new overall project site plan sheet. The overall site plan sheet should depict the existing setback requirements. b. If compliance with a specific standard cannot be demonstrated, a Special Development District (SDD) modification request may be required.	A Zoning Compliance Chart has been prepared and is presented on Sheet 230 C-106 (refer to Enclosure F).

No.	COMMENT	ACTION/ RESPONSE
P-4	<p>The plan shall demonstrate compliance with Section 177-20 Obstructions in yards. More specifically the following items should be addressed or clarified:</p> <ul style="list-style-type: none"> <li>a. The site fencing exceeds the permitted fence heights in the front, side and rear yards. Reducing the height, particularly along the Talcott frontage should be considered.</li> <li>b. If compliance with a specific standard cannot be demonstrated, a Special Development District (SDD) modification request may be required.</li> </ul>	<p>The supplemental application letter includes a request for SDD Modification for an 8 foot high perimeter fence around the entire facility. This height is requested for security reasons as described in the letter.</p>
P-5	<p>The plan shall demonstrate compliance with Section 177-25 Shielding of outdoor lighting. If any new lighting is proposed or being modified as part of this application, a photometric plan shall be required.</p>	<p>All lighting has been specified to be shielded. Please find attached drawing Sheet 230-C-106 that depicts photometric plan for all proposed lighting in the site location.</p>
P-6	<p>The plan shall demonstrate compliance with Section 177-27 and 177-32 Drainage water and Parking. More specifically, the review comments provided by the Town Engineering Division in their 7/2/15 memorandum shall be addressed.</p>	<p>A meeting was held on 7/16/15 to discuss Engineering comments. Responses to Engineering comments provided below.</p>
P-7	<p>The plan shall demonstrate compliance with Section 177-32 Parking. More specifically the following items should be addressed or clarified:</p> <ul style="list-style-type: none"> <li>a. Parking areas and required loading areas should be identified on the plan set.</li> <li>b. The driveway width is insufficient for two-way vehicle operation and shall be increased.</li> </ul>	<p>The parking areas and loading areas are shown on Sheet 230-C-106. The driveway width has been increased to 24 feet as shown in the modified plan set (Enclosure F).</p>
P-8	<p>The plan shall demonstrate compliance with Section 177-33 Signage. More specifically, what, if any, signage is proposed part of this application?</p>	<p>The drawings in Enclosure F show details for a single small metal sign to be fixed to the entrance gate. This sign provides the emergency phone number. Two entrance stone pillars have also been added to the site design and included in Enclosure F. These will show the MDC Logo and the Street Number.</p>
P-9	<p>The plan shall demonstrate compliance with Section 177-34 Screening and Landscaping. More specifically the following items should be addressed or clarified:</p> <ul style="list-style-type: none"> <li>a. Per Section 177-340 (1), additional flowering trees should be added along the western planting area. Substitutions of some of some of the VTS for TL and increasing the size of the PSF is suggested.</li> </ul>	<p>Additional flowering trees have been added to the western planting area and are depicted in the modified plan set (Enclosure F).</p>
P-10	<p>Does the proposed generator have an enclosure? If so please depict on the plans and provide a detail.</p>	<p>The proposed generator does not have an enclosure separate from the generator itself. The generator is specified with an acoustical metal enclosure that is integral to the generator. This acoustical metal enclosure is specified to result in a noise level of 65 dBA at 23 feet from the unit.</p>
P-11	<p>A trash management statement and/or plan should be provided.</p>	<p>This has been added to the supplemental application letter.</p>
P-12	<p>An update of any additional neighborhood outreach efforts since the meeting on April 30th should be provided.</p>	<p>An updated outreach summary has been added to the supplemental application letter.</p>
P-13	<p>Additional architectural information is required, more specifically the following items should be addressed.</p> <ul style="list-style-type: none"> <li>a. Updated elevations, renderings, landscape plans and sample materials shall be provide per the latest revisions from the DRAC meeting.</li> </ul>	<p>Updated drawings are included in Enclosure F. The color board was delivered to the Town Planners office on 7-16-15.</p>

No.	COMMENT	ACTION/ RESPONSE
E-1	Why isn't the proposed site driveway perpendicular to Talcott Road? This alignment may present a challenge to the driver's view of the approaching traffic on Talcott Road looking west (right) while attempting to leave the site.	The site driveway alignment was selected in an attempt to reduce the incline (7.8%) of the proposed driveway. A perpendicular driveway would have resulted in a greater incline. The site and grading design attempted to re-grade the site and driveway to avoid retaining walls and other costly maintenance items given the extensive design life of the facility. The driveway is not anticipated to have two-way traffic and is planned to carry one MDC maintenance vehicle per week during operations. The facility is automated and not manned. The driveway width has been increased to 24 feet. We checked the turning radius of a WB-40 and this vehicle can align itself perpendicular to Talcott Rd and make a right hand turn without impacting the West-to-East travel way on Talcott. With the above said, long term maintenance vehicles are expected to predominantly use Talcott to New Park as their preferred pathway to and from the site. Please see response to E-4 as well.
E-2	Show the intersection sight distances on the plan for the proposed site driveway for both directions. Additional grading and/or retaining walls may be necessary particularly to the east side of the driveway.	We have developed Sheet 230-C-107 in the modified plan set (Enclosure F) that shows the anticipated sight distance and the design assumptions. We believe we meet ConnDOT standards for sight distance in both directions. As discussed at the meeting with the Town Engineer on 7-16-15, we will add a single white edge of travel way to the Westbound travel lane.
E-3	How many heavy vehicles are estimated to access the site during construction and after the facility is operational?	During construction, the truck traffic could result in a truck every 10-15 minutes during the peak. This is not anticipated to have any impact on traffic flow in the area. During operation of the facility, one MDC maintenance vehicle per week is anticipated. Once every 10-15 years, the tunnel will require a tunnel cleaning operation that will be staged at this location. This would require more vehicles during the limited days of the operation, currently estimated to be 30-40 vehicles/day and the cleaning could take several weeks.
E-4	What is the proposed truck haul route during and after construction? The truck route should be signed to eliminate the use of Quaker Lane South.	We plan to prohibit the contractor from having construction trucks use Quaker Lane South during construction of the facility. All heavy construction trucks/trailers would use New Park. Also, the cleaning operation discussed above (every 10-15 years) would be an outside contract and those heavy vehicles would also be restricted from using Quaker Lane South. The typical MDC maintenance vehicle is an SUV or pickup truck. The predominant path is New Park, however, we request that these be allowed to use Quaker Lane South if that allows them to get to their next service call quicker.
E-5	For WHCP MH-1, where does the proposed 12" RCP connect?	More details for this 8' diameter manhole are provided in the modified plan set (Enclosure F). The 12" RCP connects to the manhole above the existing 36" drain.
E-6	What are the limits of the Talcott Road pavement restoration and what type of restoration is proposed?	An updated mill and overlay restoration sheet and full depth pavement details are provided in the modified plan set (Enclosure F).
E-7	The Talcott Road pavement cross section is 3" Class 1 asphalt (2 - 1 %" lifts) on 4" Class 4 asphalt on 12" processed aggregate base. Any road restoration shall match this thickness and material.	The full depth pavement restoration detail has been updated to account for the existing pavement section in Talcott Rd. The contractor is required to provide full depth pavement restoration 1 foot outside the actual excavation limits as shown in the modified plan set (Enclosure F).
E-8	Abbreviation Legend has not been included in plan set.	This has been included to the modified plan set (Enclosure F).
E-9	Show callouts for existing structures including top of frame and inverts.	Additional sheets showing this information have been added to the modified plan set (Enclosure F).

No.	COMMENT	ACTION/ RESPONSE
E-10	Include top of frame elevations and inverts on all proposed structures.	Additional sheets showing this information have been added to the modified plan set (Enclosure F).
E-11	The catch basin located in the southwest corner picks up the majority of the site, has the catch basin been checked for ponding and does it overtop the curb?	Yes. The capacity of the East-West gutter is over 100 cfs. The capacity of the North-South gutter is over 20 cfs. The capacity of the drain inlet is over 7 cfs. Using a 10-year design storm, we calculated the total design flow to the inlet to be 4.6 cfs.
E-12	What are the storm water control measures that are being removed?	These are temporary measures installed to comply with construction site storm water management per the CTDEEP General Permit. This reference has been removed from Sheet 230-C-131. The contractor is already required to remove all temporary measures.
E-13	Reference is made in the plan set to sheets that are not included in the plan set.	Additional sheets have been added to the modified plan set (Enclosure F).
E-14	Driveway apron within the street right-of-way should be all pavement, no gravel.	The temporary construction entrance detail on Sheet 230-C-111 (Enclosure F) has been updated to reflect pavement in the street ROW.

DEPARTMENT OF  
COMMUNITY SERVICES

July 20, 2015

Andrew Perham  
Project Manager  
The Metropolitan District  
555 Main Street P.O. Box 800.  
Hartford, CT 06142

**Subject: Special Development District Application #144 –  
1 Charter Oak Boulevard (Southwest Corner Fronting on Talcott Rd)  
Final Planning Review Comments**

Dear Mr. Perham:

The Planning Division received above-referenced revised plans, supporting information and narrative response to previous staff comments and notes that all of the Planning Division's previous review comments have been satisfactorily addressed.

If you have any questions please contact me at 860.561.7556.

Best Regards,



Todd Dumais  
Town Planner

C: Mark McGovern, Director of Community Services  
Subject File

Shared/SDDTalcottRd\_SDD\_144\_PlanningComments\_Final\_Jul15



**TOWN OF WEST HARTFORD**  
50 SOUTH MAIN STREET  
WEST HARTFORD, CONNECTICUT 06107-2485  
(860) 561-7555 FAX: (860) 561-7504  
<http://www.westhartford.org>

*An Equal Opportunity/Affirmative Action Employer*



## MEMORANDUM

TO: Todd Dumais, Town Planner

FROM: *DTM*  
*QW* Duane J. Martin, P.E., Town Engineer  
Julie A. Viera, P.E., Civil Engineer II

RE: Proposed 1 Charter Oak Boulevard, West Hartford, CT

DATE: June 10, 2014

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The Engineering Division completed the review of the proposed South Tunnel Access Shaft at 1 Charter Oak Boulevard Special Development District and Zone Change Request application submission received on July 17, 2015. All of the Engineering Division comments have been satisfactorily addressed.

The following is a minor comments:

Please change the proposed white painted pavement to white epoxy resin.