CONSTRUCTION MANAGEMENT

TRANSMITTAL

Part A: Project Information			
Date of Transmittal:	7/31/19	PHA Contract File No.:	000900.00 002
Port Area:	Volkswagen Yard	PHA Project No.:	2018-0291
Project Name:	REHABILITATION OF DRAINAGE SYSTEM AT VOLKSWAGEN YARD AT TURNING BASIN TERMINAL		

Part B: Sender / Receiver Information			
From:	Zach Kuebker	To:	Oscar Zavala
Company:	Jerdon Enterprise, L.P.	Company:	Port of Houston
Address:	13403 Redfish Lane Stafford, TX 77477	Address:	111 East Loop North Houston, TX 77029
Phone:	281-261-5000	Phone:	713-670-2485

Part C: Item Description			
Checked/Approved By:		Action Required:	
Regarding:		Action Required by Date:	
Reference Number:		Spec/Drawing Ref.:	

Item Description
Close Out As-Built Drawings

Attachments (list):	

Submittal

Jerdon Job No. 5450

Project: Rehabilitation of Drainage System at Volkswagon Yard at Turning Basin

Description: Close Out As-Built Drawings

Submittal # 037
Jerdon Enterprise, L.P.

This submittal has been reviewed for quality and design intent only. Dimension and quality are the responsibility of each subcontractor and supplier. Approval of this submittal does not relieve subcontractor or supplier from fulfilling his contract in accordance with the plans and specifications.

Specification Section 000900.00 002
Date: 7/31/19 By: Zach Kuebker

CC: File

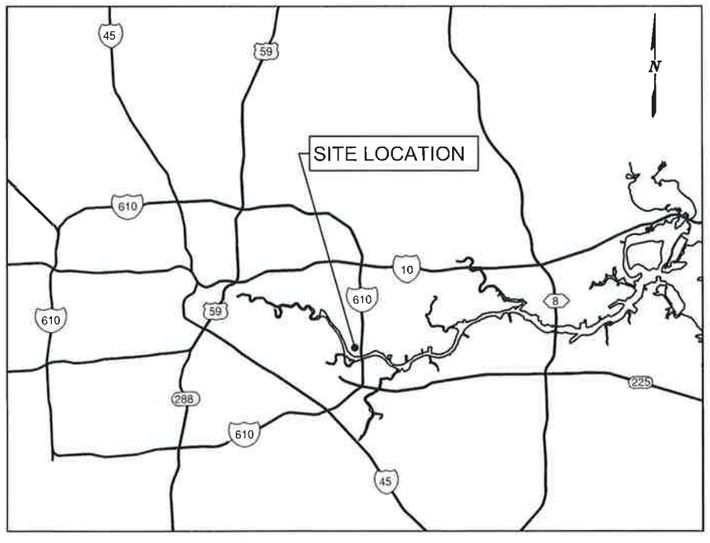
13403 Redfish Drive • Stafford, Texas 77477
Phone (281) 261-5000 Fax (281) 261-5500

As-Built Drawings 7/31/19

PORT OF HOUSTON AUTHORITY

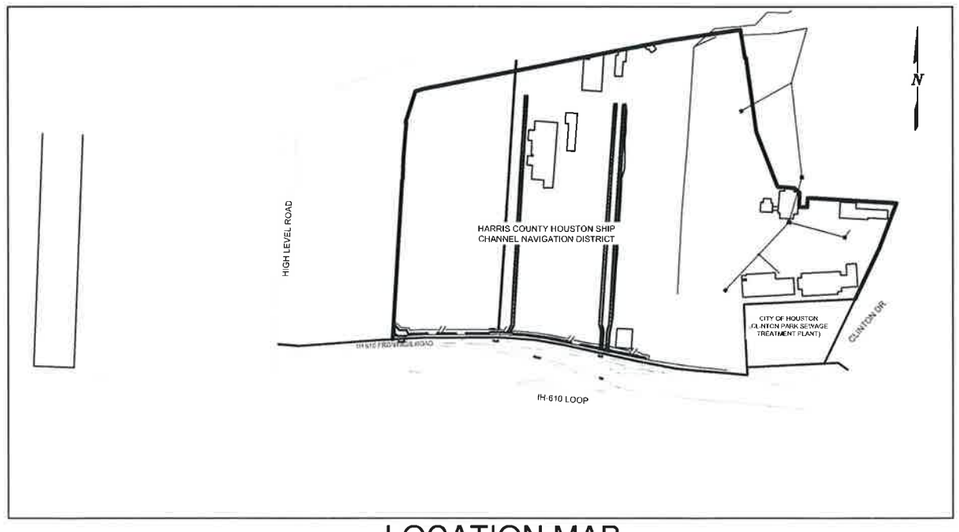
REHABILITATION OF DRAINAGE SYSTEM AT VOLKSWAGEN YARD AT TURNING BASIN TERMINAL

DWG NO: C10-D21-003
OCTOBER 02, 2018



VICINITY MAP

KEY MAP NO. 497R, 498N, 497V & 498S



LOCATION MAP

N.T.S.

CivilTech Engineering, Inc.

STATE OF TEXAS
ARTHUR M. PISANA
120237
LICENSED PROFESSIONAL ENGINEER
10/02/2018

GENERAL NOTES

1. ALL WORK AND MATERIALS SHALL CONFORM TO THE SPECIFICATIONS AND DETAILS FOR CONSTRUCTION AS FURNISHED BY THE PORT AUTHORITY. ALL WORK AND MATERIALS NOT IN CONFORMANCE WITH THESE SPECIFICATIONS AND DETAILS ARE SUBJECT TO REMOVAL AND REPLACEMENT AT THE CONTRACTOR'S EXPENSE.

2. NOTIFY PORT CONTRACT REPRESENTATIVE WHERE EXISTING CONDITIONS REQUIRE REPAIR PRIOR TO INSTALLATION.

3. EXISTING UTILITY STRUCTURES ARE WITHIN VICINITY OF THE PROJECT, CONTRACTOR RESPONSIBLE FOR ANY DAMAGE AS A RESULT OF CONSTRUCTION ACTIVITIES.

4. LOCATION OF ALL UNDERGROUND UTILITIES AND STRUCTURES SHOWN ON DRAWINGS ARE APPROXIMATE. PRE-LOCATE UTILITIES BY WHATEVER MEANS NECESSARY (METAL DETECTION EQUIPMENT, PROBES, EXCAVATION, SURVEY) BEFORE CONSTRUCTION ACTIVITIES BEGIN. RESTORE UTILITY AND GROUND TO ITS ORIGINAL CONDITION AFTER WORK IS COMPLETE. NO SEPARATE PAYMENT SHALL BE MADE FOR SUCH WORK. CONTRACTOR IS RESPONSIBLE FOR DAMAGES THAT OCCUR DUE TO FAILURE TO EXACTLY LOCATE AND PRESERVE UNDERGROUND UTILITIES ENCOUNTERED. FIELD VERIFY SIZE OF UTILITIES FOR "CRITICAL LOCATES". ADDITIONALLY CONTRACTOR SHALL CONTACT THE TEXAS ONE-CALL CENTER NO LESS THAN 48 HRS BEFORE EXCAVATION IS TO BEGIN BY DIALING 1-800-545-6005 FOR PIPELINE AND OTHER UTILITIES TO MAP THE LOCATION OF THEIR LINES BEFORE CONTRACTOR EXCAVATES.

5. ALL MATERIALS FROM DEMOLITION SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE DISPOSED PROPERLY PER FEDERAL, STATE AND OR LOCAL LAWS AND ORDINANCES.

6. SAW CUT THE EDGES OF PAVED AREAS CLEAN, NEAT AND TRUE TO LINE SO NO UNWANTED CHIPPING OR BREAKING OF THE REMAINING EXISTING PAVEMENT OCCURS. DEMOLITION WILL BE PERFORMED IN PHASES. SEE SHEETS C-007 AND C-008.

7. THE CONTRACTOR SHALL DISPOSE OF EXCESS EXCAVATED MATERIALS OFF-SITE AT AN APPROVED DISPOSAL LOCATION.

8. PRIOR TO START OF CONSTRUCTION ACTIVITIES, INSTALL STORM WATER POLLUTION PREVENTION PLAN (SWPPP) DEVICES AS SHOWN ON THESE DRAWINGS.

9. PROVIDE HAYBALE PERIMETER FENCE AT EXCESS EXCAVATED SOIL STOCKPILE LOCATION.

10. ALL WORK SHALL BE DONE IN ACCORDANCE WITH APPLICABLE LOCAL CODES AND REQUIREMENTS.

11. CONTRACTOR SHALL COORDINATE WITH THE PORT OF HOUSTON FOR THE FOLLOWING:
    - ENTRY INTO THE SITE
    - SAFETY ISSUES
    - WATER SOURCE
    - WORK AREA ENCLOSURE
    - HAUL ROUTES
    - DISPOSING OF MATERIAL

12. CONTRACTOR SHALL USE THE PORT OF HOUSTON AUTHORITY STANDARD TECHNICAL SPECIFICATIONS - DECEMBER 2011 (STANDTARDS), UNLESS OTHERWISE DIRECTED.

13. CONTRACTOR SHALL VERIFY BENCHMARK ELEVATIONS PRIOR TO ANY CONSTRUCTION ACTIVITY. IF VERTICATION IS NOT MADE, CONTRACTOR SHALL ASSUME RESPONSIBILITY FOR BENCHMARK AND ELEVATIONS.

STORM WATER POLLUTION PREVENTION PLAN (SWPPP)

1. CONTRACTOR SHALL IMPLEMENT INLET PROTECTION DEVICES AT LOCATIONS SHOWN ON THE TYPICAL STORM WATER POLLUTION PREVENTION (SWPP) PLANS TO KEEP SILT AND OR EXCAVATED MATERIALS FROM ENTERING INTO THE STORM WATER INLETS AND DITCHES EVENTUALLY POLLUTING THE RECEIVING STORM.

2. DURING THE EXCAVATION PHASE OF THE PROJECT, CONTRACTOR SHALL SCHEDULE THE WORK IN SHORT SEGMENTS SO THAT EXCAVATION MATERIAL CAN BE QUICKLY HAULED AWAY FROM THE SITE AND TO PREVENT IT FROM STAYING UNCOLLECTED ON THE EXISTING PAVEMENT. ANY LOOSE EXCAVATED MATERIAL WHICH FALLS ON PAVEMENTS OR DRIVEWAYS SHALL BE SWEPT BACK INTO THE EXCAVATED AREA.

3. CONTRACTOR SHALL CLEAN UP THE PAVED PARKING YARD, AS NECESSARY, TO REMOVE ANY EXCESS MUD, SILT OR ROCK TRACKED FORM THE EXCAVATED AREA

4. CONTRACTOR SHALL FOLLOW GOOD HOUSEKEEPING PRACTICES DURING THE CONSTRUCTION OF THE PROJECT. ALWAYS CLEANING UP DIRT AND LOOSE MATERIAL AS CONSTRUCTION PROGRESSES.

5. CONTRACTOR TO INSPECT AND MAINTAIN THE AREAS LISTED BELOW AT LEAST ONCE EVERY FOURTEEN (14) CALENDAR DAYS AND WITHIN 24 HOURS OF THE END OF A STORM EVENT OF 0.5 INCHES OR GREATER.

- DISTURBED AREAS OF THE CONSTRUCTION SITE THAT HAVE NOT BEEN FINALLY STABILIZED.
- AREAS USED FOR STORAGE OF MATERIALS THAT ARE EXPOSED TO PRECIPITATION.
- STRUCTURAL CONTROL MEASURES
- LOCATIONS WHERE VEHICLES ENTER OR EXIT THE SITE

INDEX OF SHEETS

DESIGN CRITERIA

1. THE PROJECT SCOPE OF WORK CONSISTS OF REMOVING FIVE (5) EXISTING GRATE INLETS AND REPLACING THEM WITH PROPOSED INLETS.

2. THE DESIGN IS BASED ON INFORMATION FROM THE REPORT TITLED DRAINAGE ANALYSIS AND PROPOSED DRAINAGE IMPROVEMENTS FOR THE VOLKSWAGEN YARD & IH 610 FRONTAGE ROAD FOR THE PORT OF HOUSTON DATED MAY 30, 2017, PREPARED BY CIVILTECH ENGINEERING, INC.

PORT OF HOUSTON AUTHORITY

CONSULTANT:
CivilTech Engineering, Inc.

SEAL:
STATE OF TEXAS
ARTHUR M. PISANA
120237
LICENSED
PROFESSIONAL ENGINEER
10/02/2018

RECOMMENDED: DATE
MANAGER, ENGINEERING

APPROVED: DATE
PORT CONTRACT REPRESENTATIVE MANAGING DIRECTOR, ENGINEERING

PROJECT TITLE:
REHABILITATION OF DRAINAGE SYSTEM AT VOLKSWAGEN YARD AT TURNING BASIN TERMINAL

SHEET TITLE:
GENERAL NOTES & INDEX OF SHEETS

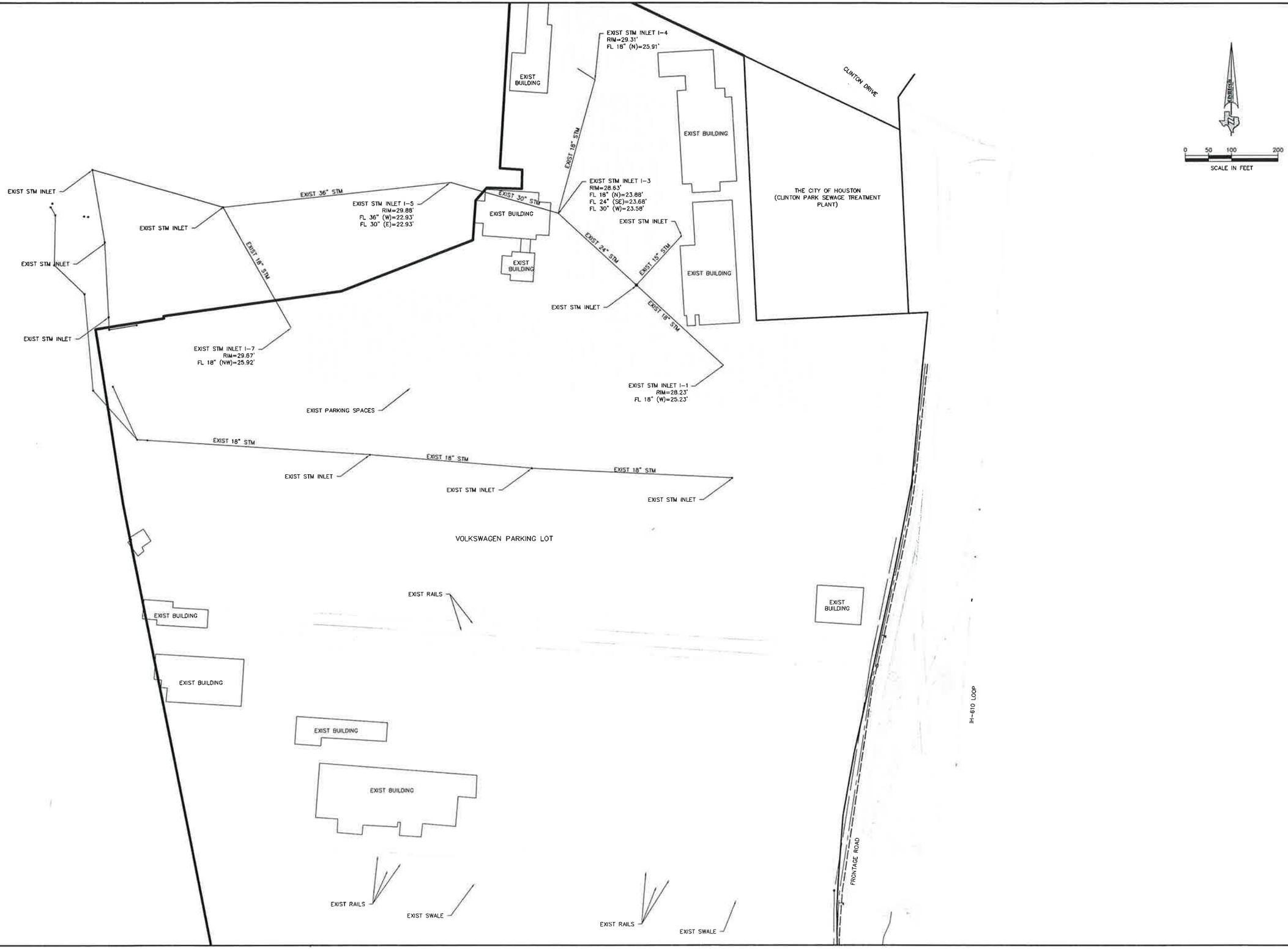
REV	DATE	DESCRIPTION

DESIGNER:	AP
CADD:	CDJ
CHECKER:	AP
DATE:	7-11-18
SCALE:	

DRAWING NO.: C10-D21-003

SHEET NO.: G-002

REV. NO.:



PORT OF HOUSTON AUTHORITY

CONSULTANT:

CivilTech Engineering, Inc.

SEAL:

STATE OF TEXAS
ARTHUR M. PISANA
120237
LICENSED
PROFESSIONAL ENGINEER
10/02/2018

RECOMMENDED: _____ DATE

MANAGER, ENGINEERING

APPROVED: _____ DATE

PORT CONTRACT REPRESENTATIVE
MANAGING DIRECTOR, ENGINEERING

PROJECT TITLE:

REHABILITATION OF DRAINAGE SYSTEM AT VOLKSWAGEN YARD AT TURNING BASIN TERMINAL

SHEET TITLE:

EXISTING SITE PLAN

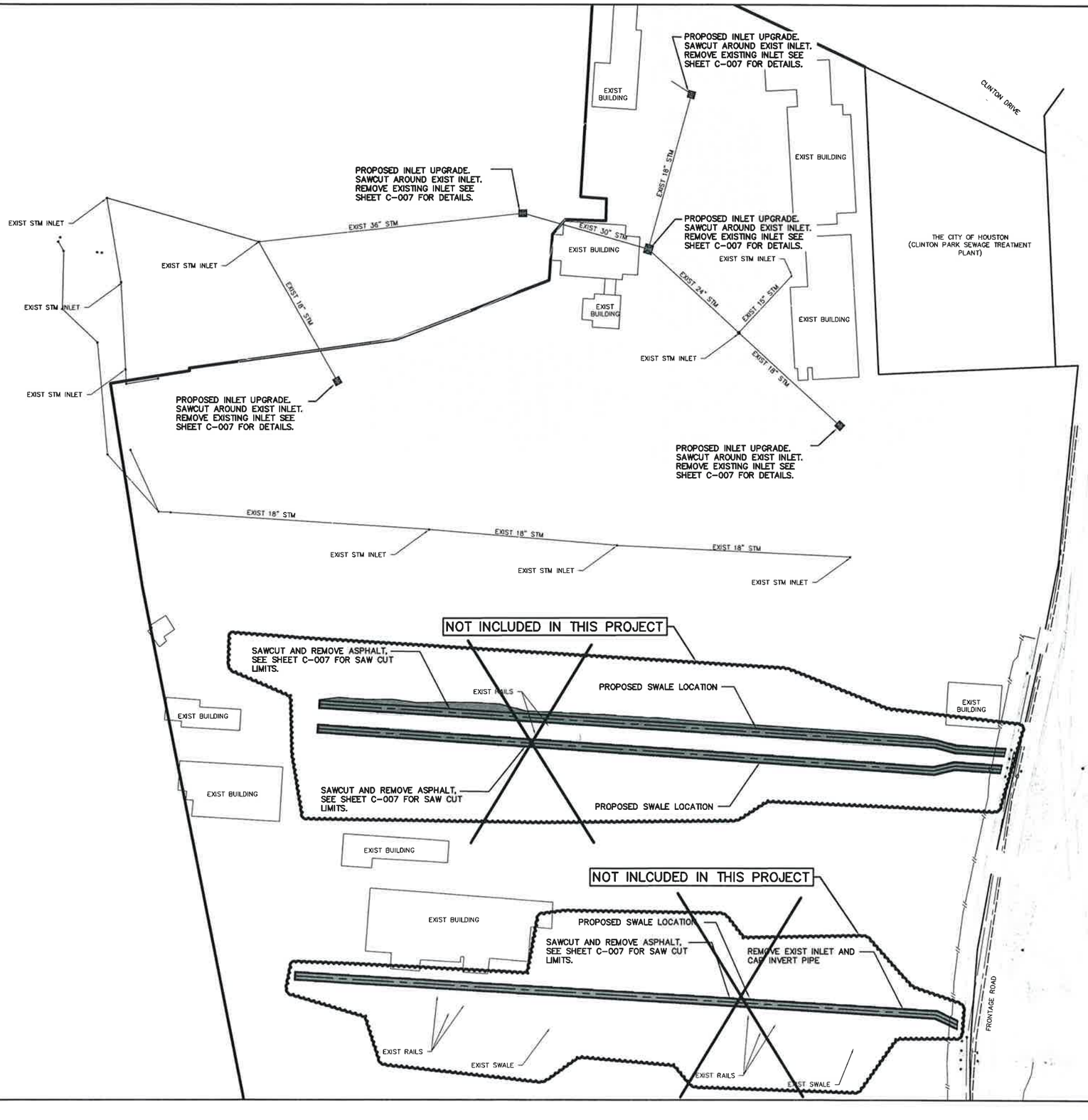
REV	DATE	DESCRIPTION

DESIGNER:	AP
CADD:	CDJ
CHECKER:	AP
DATE:	7-11-18
SCALE:	1"=100'

DRAWING NO.
C10-D21-003

SHEET NO.
G-003

REV. NO.



PORT OF HOUSTON AUTHORITY

CONSULTANT:
CivilTech Engineering, Inc.

SEAL:
STATE OF TEXAS
ARTHUR M. PISANA
120237
LICENSED
PROFESSIONAL ENGINEER
10/02/2018

RECOMMENDED: DATE
MANAGER, ENGINEERING

APPROVED: DATE
PORT CONTRACT REPRESENTATIVE MANAGING DIRECTOR, ENGINEERING

PROJECT TITLE:
REHABILITATION OF DRAINAGE SYSTEM AT VOLKSWAGEN YARD AT TURNING BASIN TERMINAL

SHEET TITLE:
PROPOSED DEMOLITION PLAN

REV	DATE	DESCRIPTION

DESIGNER:	AP
CADD:	CDJ
CHECKER:	AP
DATE:	7-11-18
SCALE:	1"=100'

DRAWING NO.
C10-D21-003

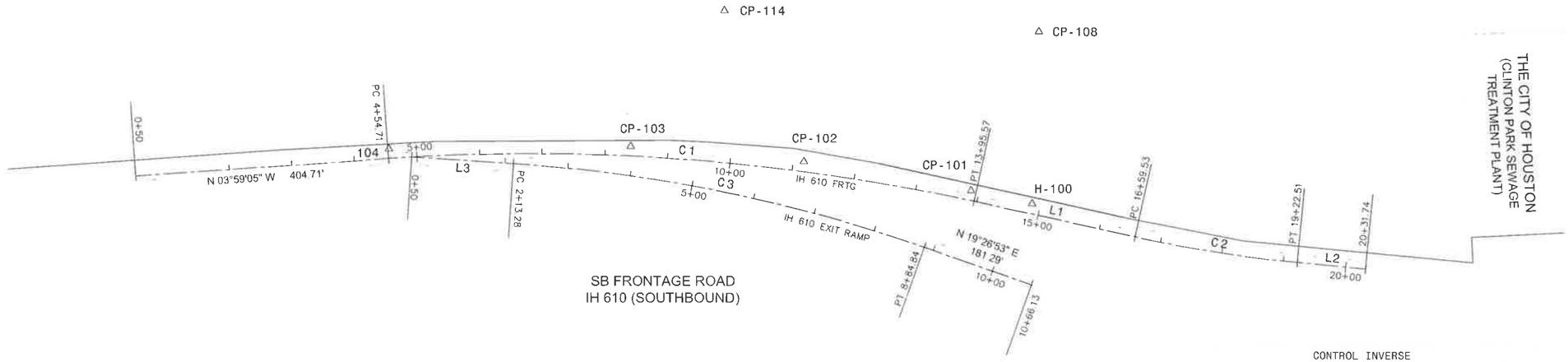
SHEET NO. G-004

REV. NO.

POINT	NORTHING(Y)	EASTING(X)	ELEV.	STATION & OFFSET		DESCRIPTION
H-100	13,835,137.10	3,153,494.51	27.39	14+86.76	-16.32	SET 3/8"IRw/LANDTECH CAP
CP-101	13,835,039.72	3,153,473.60	27.50	13+87.20	-15.86	SET 3/8"IRw/LANDTECH CAP
CP-102	13,834,772.20	3,153,426.60	27.18	11+16.83	-16.21	SET 3/8"IRw/LANDTECH CAP
CP-103	13,834,496.15	3,153,402.52	26.13	8+40.97	-15.47	SET 3/8"IRw/LANDTECH CAP
H-104	13,834,109.96	3,153,406.50	25.02	4+56.36	-15.59	SET 3/8"IRw/LANDTECH CAP
H-106	13,835,216.07	3,152,226.86	32.84	13+20.78	-1272.57	SET CONCRETE NAIL
CP-107	13,835,182.73	3,152,719.90	31.85	13+70.96	-782.80	SET CONCRETE NAIL
CP-108	13,835,147.27	3,153,217.83	30.44	14+37.33	-288.74	SET CONCRETE NAIL
CP-112	13,834,710.29	3,152,195.74	33.62	9+54.65	-1233.80	SET CONCRETE NAIL
CP-113	13,834,676.67	3,152,685.21	32.28	9+60.15	-743.22	SET CONCRETE NAIL
CP-114	13,834,645.72	3,153,184.16	31.09	9+70.41	-243.46	SET CONCRETE NAIL

NOTES: 1. (-) DENOTES OFFSET LEFT
2. STATION AND OFFSET ARE CALCULATED FROM IH 610 FRTG ALIGNMENT

HARRIS COUNTY HOUSTON SHIP CHANNEL NAVIGATION DISTRICT
(VOLKSWAGEN OF AMERICA, INC. - LEASE TRACT)



COURSE	BEARING	DISTANCE
L1	N 12°23'26" E	263.96'
L2	N 05°17'00" E	109.23'
L3	N 03°44'35" E	163.28'

CURVE	RADIUS	TANGENT	LENGTH	DELTA	DEGREE	CHORD	
C1	3292.00'	473.66'	940.86'	16°22'31"	1°44'26"	N 04°12'11" E	937.66'
C2	2120.00'	131.66'	262.98'	7°06'26"	2°42'09"	N 08°50'13" E	262.81'
C3	2450.00'	337.90'	671.56'	15°42'18"	2°20'19"	N 11°35'44" E	669.46'

CONTROL INVERSE

FROM POINT	BEARING	DISTANCE	TO POINT
H-104	N 00°35'29" W	386.21'	CP-103
CP-103	N 04°59'12" E	277.11'	CP-102
CP-102	N 09°57'50" E	271.61'	CP-101
CP-101	N 12°07'14" E	99.60'	H-100
H-100	N 87°53'43" W	276.87'	CP-108
CP-108	N 85°55'37" W	499.19'	CP-107
CP-107	N 86°07'55" W	494.17'	H-106
H-106	S 09°37'52" W	1,289.28'	CP-112
CP-112	S 86°04'14" E	490.63'	CP-113
CP-113	S 86°27'03" E	499.90'	CP-114

PORT OF HOUSTON AUTHORITY

CONSULTANT:
CivilTech Engineering, Inc.

STATE OF TEXAS
REGISTERED
HONG YANG
6557
PROFESSIONAL
LAND SURVEYOR
10/8/2018

RECOMMENDED: DATE
MANAGER, ENGINEERING
APPROVED: DATE
PORT CONTRACT REPRESENTATIVE
MANAGING DIRECTOR, ENGINEERING

PROJECT TITLE:
REHABILITATION OF DRAINAGE SYSTEM AT VOLKSWAGEN YARD AT TURNING BASIN TERMINAL

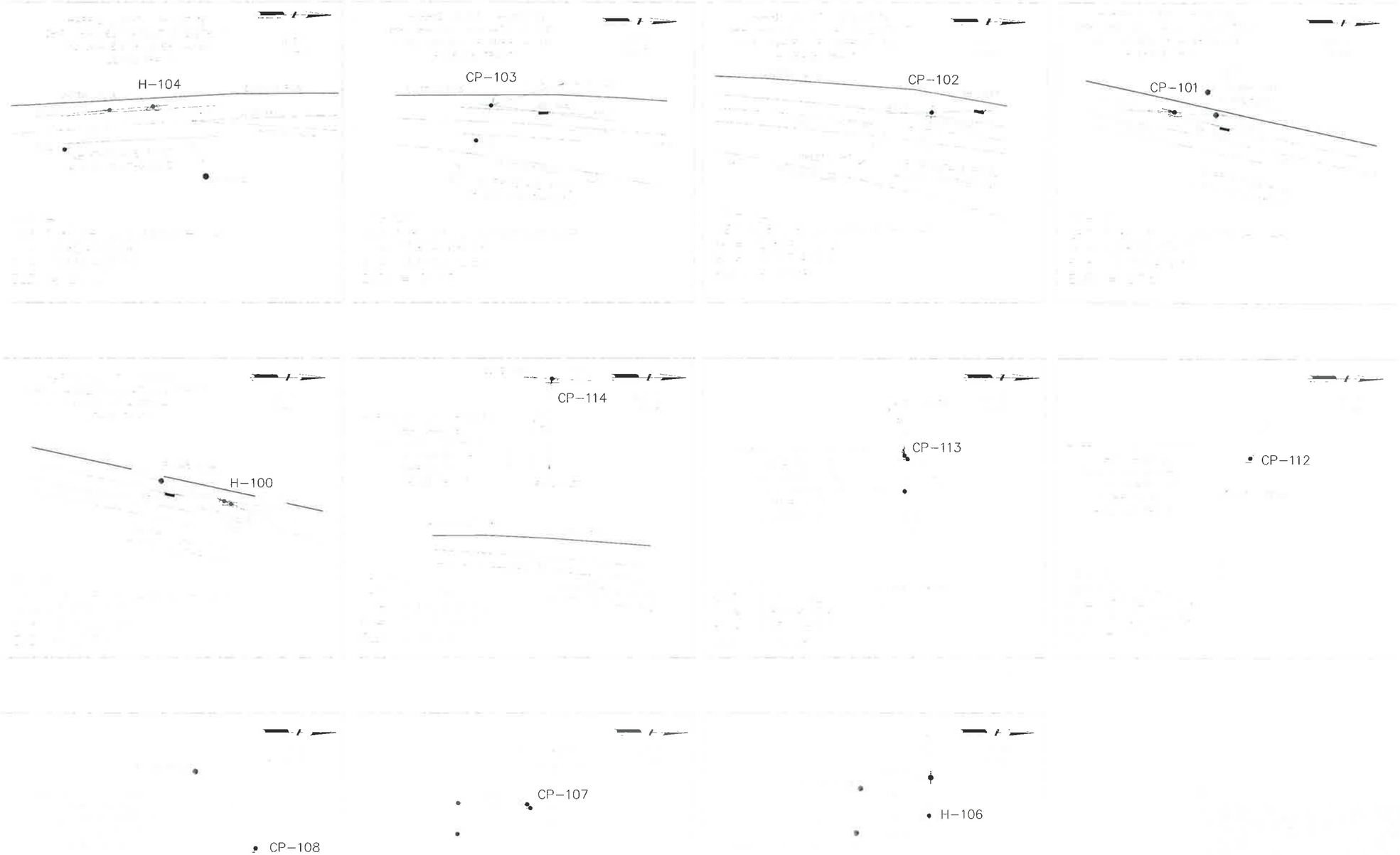
SHEET TITLE:
SURVEY CONTROL MAP

REV	DATE	DESCRIPTION

DESIGNER:	AP
CADD:	SY
CHECKER:	SY
DATE:	10-8-18
SCALE:	AS SHOWN

DRAWING NO.
360026.00

SHEET NO. S-001
REV. NO.



PORT OF HOUSTON AUTHORITY

CONSULTANT:

CivilTech Engineering, Inc.

STATE OF TEXAS REGISTERED HONG YANG 8557 PROFESSIONAL LAND SURVEYOR

10-8-2018

RECOMMENDED: DATE

MANAGER, ENGINEERING

APPROVED: DATE

PORT CONTRACT REPRESENTATIVE MANAGING DIRECTOR, ENGINEERING

PROJECT TITLE:

REHABILITATION OF DRAINAGE SYSTEM AT VOLKSWAGEN YARD AT TURNING BASIN TERMINAL

SHEET TITLE:

SURVEY CONTROL SWING TIES

REV	DATE	DESCRIPTION

DESIGNER:	AP
CADD:	SY
CHECKER:	SY
DATE:	10-8-18
SCALE:	AS SHOWN

DRAWING NO.
360026.00

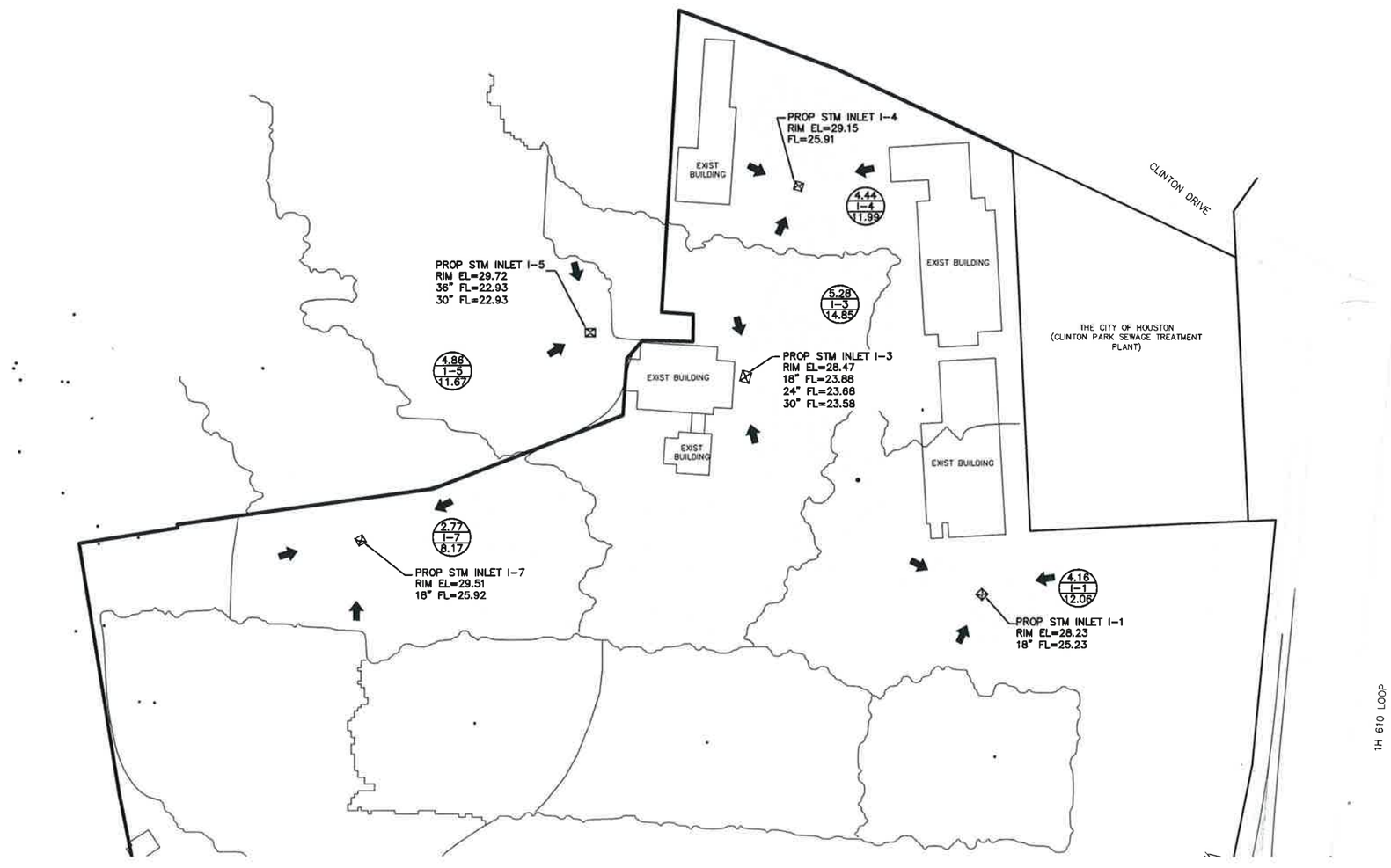
SHEET NO
S-002

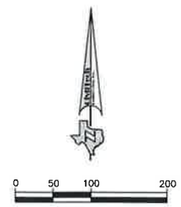
REV NO.

SYSTEM B-1

INLET NO.	EXISTING INLET TYPE	EXISTING INLET CAPACITY (CFS) ALLOWING 0.5-FT PONDING DEPTH	PROPOSED INLET TYPE	PROPOSED INLET CAPACITY (CFS) ALLOWING 0.5-FT PONDING DEPTH
I-1	TYPE D-DOUBLE GRATE	7.77	TYPE B-4 GRATE	11.46
I-3	TYPE D-DOUBLE GRATE	7.77	TYPE B-4 GRATE	11.46
I-4	TYPE D-DOUBLE GRATE	7.42	TYPE B-4 GRATE	11.46
I-5	SINGLE GRATE	3.00	TYPE B-4 GRATE	11.46
I-7	TYPE D-DOUBLE GRATE	7.77	TYPE B-4 GRATE	11.46

* INFORMATION BASED ON THE REPORT TITLED "DRAINAGE ANALYSIS AND PROPOSED DRAINAGE IMPROVEMENTS FOR VOLKSWAGEN YARD & IH-610 FRONTAGE ROAD" PREPARED FOR THE PORT OF HOUSTON, MAY 30,2017. PREPARED BY CIVILTECH ENGINEERING INC.





LEGEND

- DRAINAGE AREA BOUNDARY
- SUB-DRAINAGE AREA BOUNDARY
- SHEET FLOW (100- YEAR EVENT)
- 1.00 / E15-1 / 1.25 — DRAINAGE AREA IN ACRES / DRAINAGE AREA (INLET) NO. / 2-YEAR RUNOFF IN CFS

NOTES:
1. INFORMATION IS BASED ON THE REPORT TITLED "DRAINAGE ANALYSIS AND PROPOSED DRAINAGE IMPROVEMENTS FOR VOLKSWAGEN YARD & IH 610 FRONTAGE ROAD" FOR PORT OF HOUSTON. MAY 30, 2017. PREPARED BY CIVILTECH ENGINEERING, INC.
2. THIS DRAINAGE AREA MAP REPRESENTS INLET CAPACITY IMPROVEMENTS FOR EXISTING INLETS I-1, I-3, I-4, I-5 AND I-7.

PORT OF HOUSTON AUTHORITY

CONSULTANT:
CivilTech Engineering, Inc.

SEAL:
STATE OF TEXAS
ARTHUR M. PISANA
120237
LICENSED
PROFESSIONAL ENGINEER
10/02/2018

RECOMMENDED: DATE
MANAGER, ENGINEERING
APPROVED: DATE
PORT CONTRACT REPRESENTATIVE MANAGING DIRECTOR, ENGINEERING

PROJECT TITLE:
REHABILITATION OF DRAINAGE SYSTEM AT VOLKSWAGEN YARD AT TURNING BASIN TERMINAL

SHEET TITLE:
DRAINAGE AREA MAP

REV	DATE	DESCRIPTION

DESIGNER:	AP
CADD:	CDJ
CHECKER:	AP
DATE:	7-11-18
SCALE:	1"=100'

DRAWING NO.: C10-D21-003
SHEET NO.: C-001
REV. NO.:

NOTES:

1. CONTRACTOR SHALL CONFIRM WORK AREA REQUIRED TO REMOVE INLET, SET PROPOSED INLET AND CONNECT STORM PIPE.
2. EACH WORK AREA WILL REQUIRE AN ENCLOSED WORK SPACE WITH TRAFFIC BARRIERS. CONTRACTOR SHALL COORDINATE WITH P.O.H. ON SIZE AND ENTRY LOCATION.

0 25 50 100
SCALE IN FEET

Transitions from 30" RCP → 20" HDPE somewhere along this run

EXIST BUILDING

EXIST 8" PVC

PROP WORK AREA
(SEE SHEET C-007)

PROP STM INLET I-4
RIM EL~~=29.15~~ 29.40
8" FL=27.51
18" FL=25.91

EXIST 18" STM

EXIST BUILDING

CLINTON DRIVE

PROP WORK AREA
(SEE SHEET C-007)

PROP STM INLET I-5
RIM EL~~=28.72~~ 29.90
36" FL=22.93 (SW)
~~30" FL=22.93~~ (SE)
20" HDPE 22.73

EXIST 36" STM

EXIST 30" STM

EXIST BUILDING

PROP WORK AREA
(SEE SHEET C-007)

PROP STM INLET I-3
RIM EL~~=28.47~~ 28.65
18" FL=23.88 (N)
24" FL=23.68 (SE)
30" FL=23.58 (NW)

EXIST 24" STM

EXIST STM INLET

EXIST 15" STM

EXIST BUILDING

THE CITY OF HOUSTON
(CLINTON PARK SEWAGE TREATMENT PLANT)

EXIST 18" STM

BOUNDARY LINE

EXIST STM INLET

EXIST 18" STM

PROP WORK AREA
(SEE SHEET C-007)

PROP STM INLET I-7
RIM EL~~=29.50~~ 29.67
18" FL=25.92 (NW)

PROP WORK AREA
(SEE SHEET C-007)

PROP STM INLET I-1
RIM EL~~=28.07~~ 28.26
18" FL~~=25.23~~ (NW)
25.53

EXIST 18" STM

EXIST STM INLET

EXIST 18" STM

EXIST STM INLET

EXIST 18" STM

EXIST STM INLET

PORT OF HOUSTON AUTHORITY

CONSULTANT:
CivilTech Engineering, Inc.

SEAL:
STATE OF TEXAS
ARTHUR M. PISANA
120237
LICENSED
PROFESSIONAL ENGINEER
10/02/2018

RECOMMENDED: DATE
MANAGER, ENGINEERING

APPROVED: DATE
PORT CONTRACT REPRESENTATIVE
MANAGING DIRECTOR, ENGINEERING

PROJECT TITLE:
REHABILITATION OF DRAINAGE SYSTEM AT VOLKSWAGEN YARD AT TURNING BASIN TERMINAL

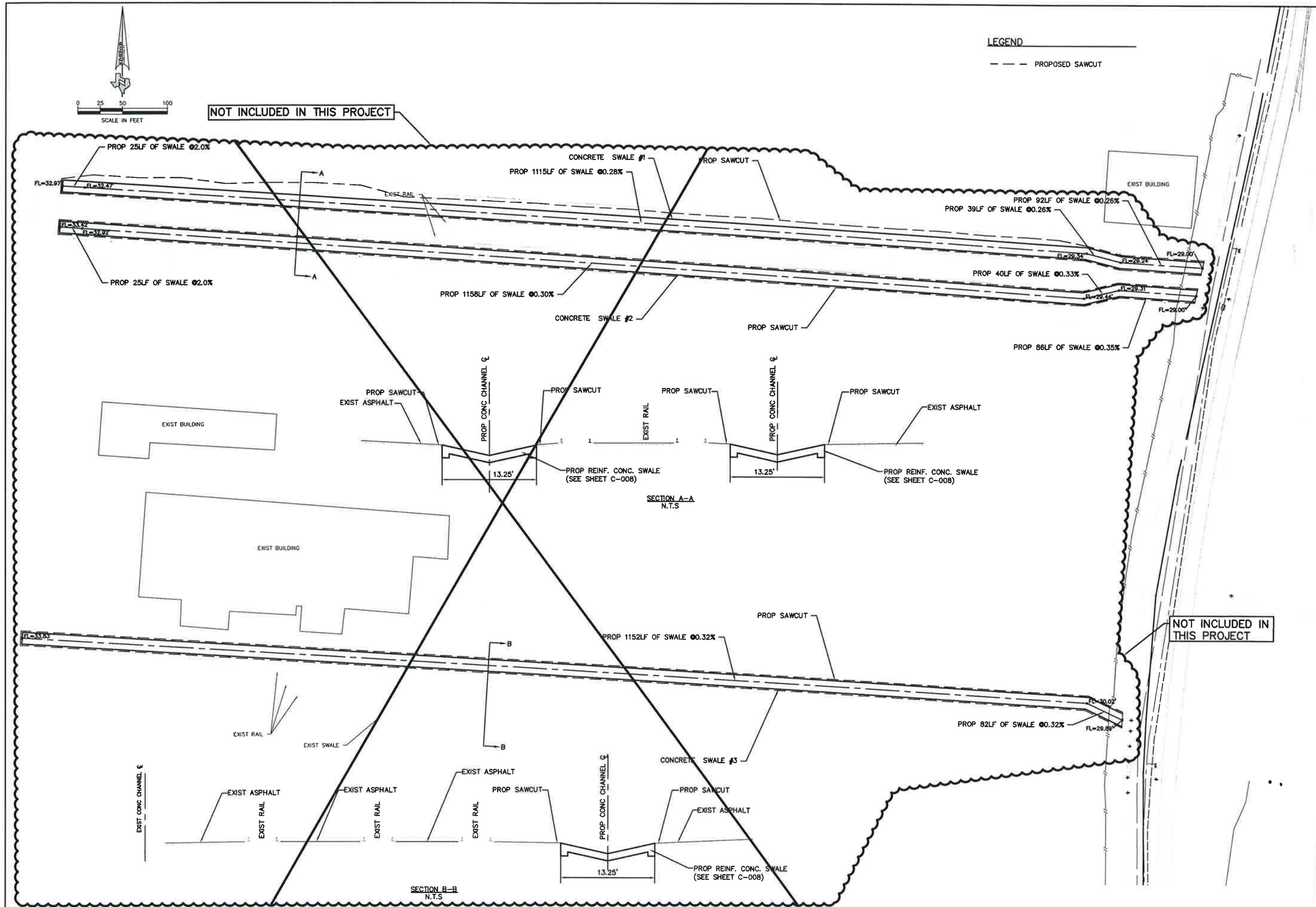
SHEET TITLE:
PROPOSED INLET REPLACEMENT PLAN

REV	DATE	DESCRIPTION

DESIGNER:	AP
CADD:	CDJ
CHECKER:	AP
DATE:	7-11-18
SCALE:	1"=50'

DRAWING NO.
C10-D21-003

SHEET NO. C-002
REV. NO.



PORT OF HOUSTON AUTHORITY

CONSULTANT:
CivilTech Engineering, Inc.

SEAL:
STATE OF TEXAS
ARTHUR M. PISANA
120237
LICENSED
PROFESSIONAL ENGINEER
9/02/2018

RECOMMENDED: DATE
MANAGER, ENGINEERING

APPROVED: DATE
PORT CONTRACT REPRESENTATIVE
MANAGING DIRECTOR, ENGINEERING

PROJECT TITLE:
REHABILITATION OF DRAINAGE SYSTEM AT VOLKSWAGEN YARD AT TURNING BASIN TERMINAL

SHEET TITLE:
PROPOSED CONCRETE SWALE GRADING PLAN

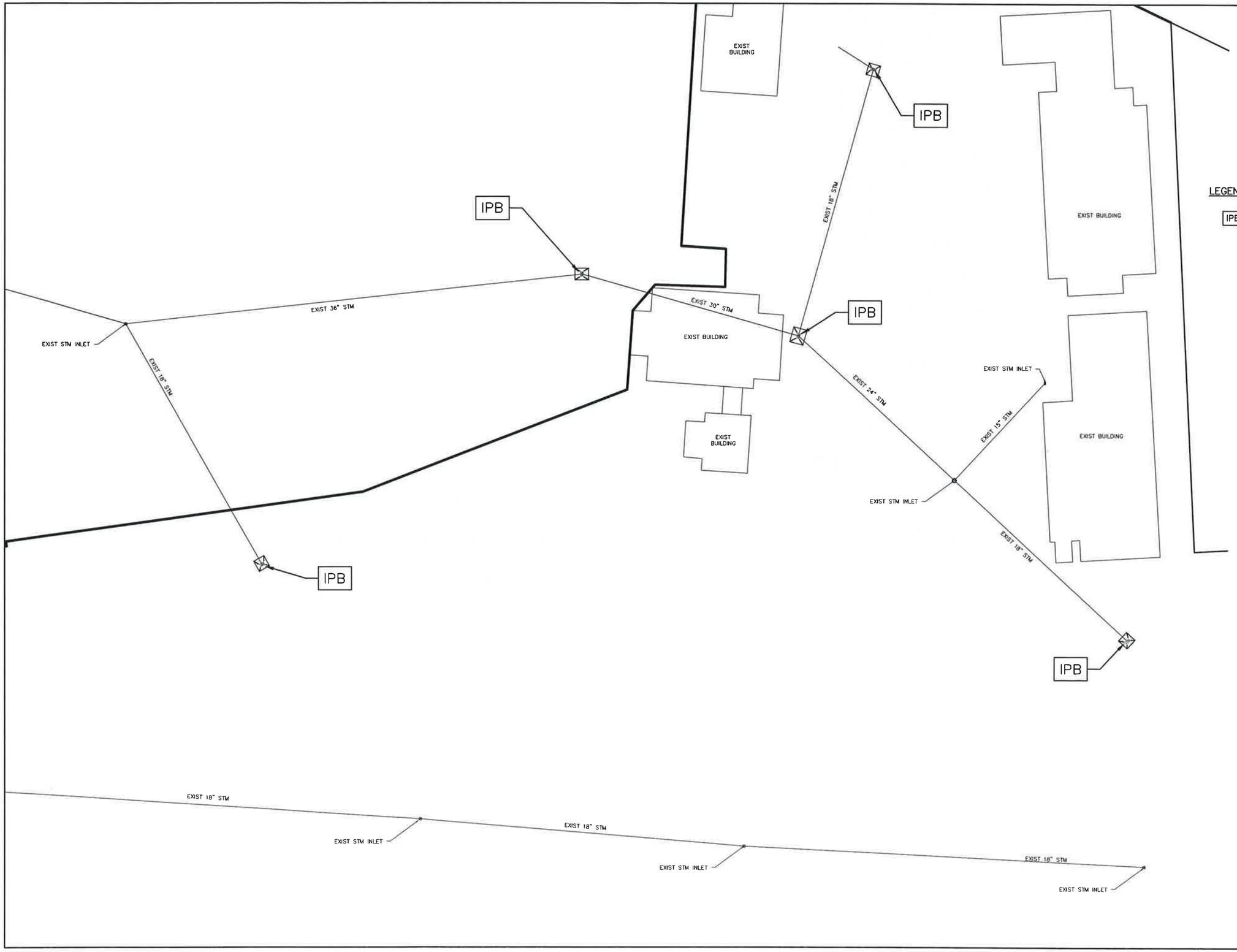
REV	DATE	DESCRIPTION

DESIGNER:	AP
CADD:	CDJ
CHECKER:	AP
DATE:	7-11-18
SCALE:	1"=50'

DRAWING NO.
C10-D21-003

SHEET NO.
C-003

REV. NO.



PORT OF HOUSTON AUTHORITY

CONSULTANT:
CivilTech Engineering, Inc.

SEAL:
STATE OF TEXAS
ARTHUR M. PISANA
120237
LICENSED PROFESSIONAL ENGINEER
10/02/2018

RECOMMENDED: _____ DATE
MANAGER, ENGINEERING

APPROVED: _____ DATE
PORT CONTRACT REPRESENTATIVE
MANAGING DIRECTOR, ENGINEERING

PROJECT TITLE:
REHABILITATION OF DRAINAGE SYSTEM AT VOLKSWAGEN YARD AT TURNING BASIN TERMINAL

SHEET TITLE:
STORM WATER POLLUTION PREVENTION PLAN (1 OF 2)

REV	DATE	DESCRIPTION

DESIGNER:	AP
CADD:	CDJ
CHECKER:	AP
DATE:	7-11-18
SCALE:	1"=50'

DRAWING NO.: C10-D21-003

SHEET NO.: C-004

REV. NO.:

NOT INCLUDED IN THIS PROJECT

EXIST BUILDING

IPB

FRONTAGE ROAD

NOT INLCUDED IN THIS PROJECT

IPB

NORTH

0 25 50 100

SCALE IN FEET

LEGEND

IPB — INLET PROTECTION BARRIER

PORT OF HOUSTON AUTHORITY

CONSULTANT:

CivilTech Engineering, Inc.

SEAL:

STATE OF TEXAS
ARTHUR M. PISANA
120237
LICENSED
PROFESSIONAL ENGINEER
10/02/2018

RECOMMENDED: _____ DATE

MANAGER, ENGINEERING

APPROVED: _____ DATE

PORT CONTRACT REPRESENTATIVE
MANAGING DIRECTOR, ENGINEERING

PROJECT TITLE:

REHABILITATION OF DRAINAGE SYSTEM AT VOLKSWAGEN YARD AT TURNING BASIN TERMINAL

SHEET TITLE:

STORM WATER POLLUTION PREVENTION PLAN (2 OF 2)

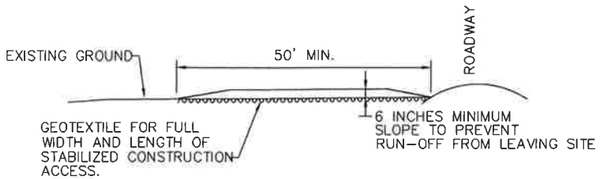
REV	DATE	DESCRIPTION

DESIGNER:	AP
CADD:	CDJ
CHECKER:	AP
DATE:	7-11-18
SCALE:	1"=50'

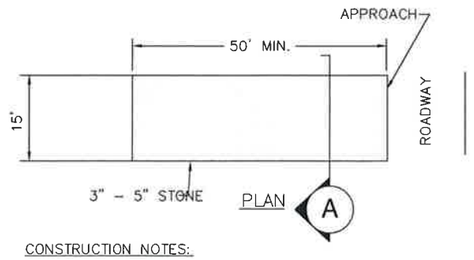
DRAWING NO.
C10-D21-003

SHEET NO. C-005

REV. NO.



A SECTION

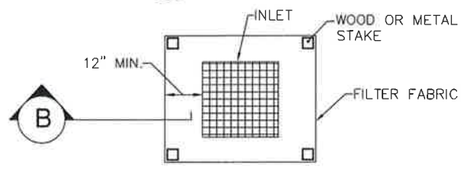


CONSTRUCTION NOTES:

1. THE APPROACH TRANSITIONS SHALL BE NO STEEPER THAN 6:1
2. PROVIDE TEMPORARY CULVERT WHERE ROADSIDE DITCH CROSSES.

1 CONSTRUCTION ACCESS DETAIL
N.T.S.

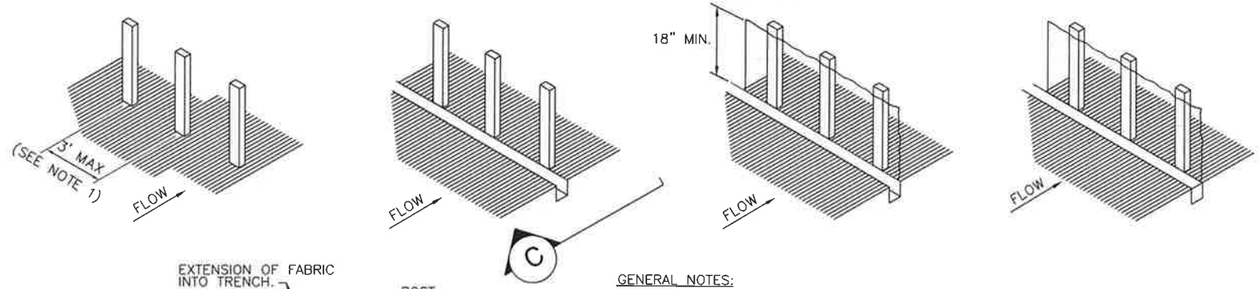
B SECTION

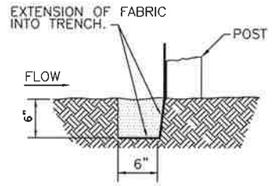


PLAN

2 INLET PROTECTION BARRIER DETAIL
N.T.S.

1. SET 2"x2" WOOD POSTS AT REQUIRED SPACING.
2. EXCAVATE TRENCH UPSLOPE ALONG THE LINE OF STAKES.
3. SECURE FABRIC MATERIAL TO STAKES AND EXTEND IT INTO THE TRENCH.
4. BACKFILL AND COMPACT THE EXCAVATED SOIL.





C SECTION
N.T.S.

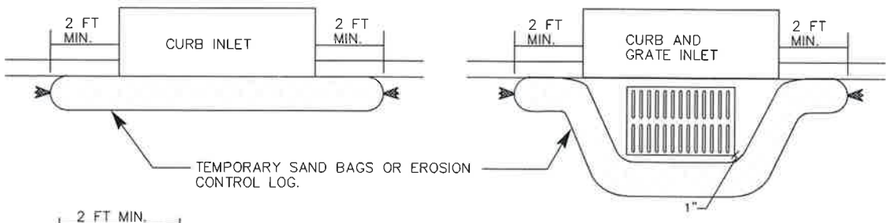
GENERAL NOTES:

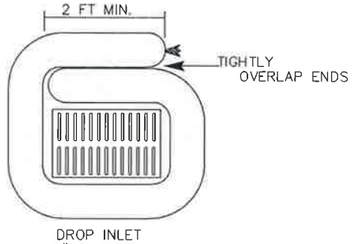
1. POSTS TO BE SET AT 3' MAXIMUM SPACING. IF FACTORY PREASSEMBLED FENCE WITH SUPPORT NETTING IS USED, SPACING OF POST MAY BE INCREASED TO 8 FEET MAXIMUM.
2. WHEN TWO SECTIONS OF FILTER ADJOIN EACH OTHER THEY SHOULD BE OVERLAPPED MINIMUM 6 INCHES AT THE POSTS, AND FOLDED.
3. INCLUDE WIRE REINFORCING FOR SLOPES GREATER THAN 5%.

×—(RSF)—×— — REINFORCED SILT FENCE

×—(SF)—×— — SILT FENCE

3 SILT FENCE DETAIL
N.T.S.





DROP INLET
USE 8" DIAMETER LOG

NOTES:

1. INSTALL SAND BAGS OR LOGS IN LOCATIONS AS SHOWN IN PLANS OR AS DIRECTED.
2. FOR LOGS USE 100% SHREDDED MULCH OR OTHER LOOSE AND CHUNKY BIODEGRADABLE MATERIAL AS FILL FOR LOGS. NO FINES.
3. EROSION CONTROL LOG TO BE FILTREXX FILTER SOXX OR APPROVED EQUAL.

4 TEMPORARY INLET PROTECTION DETAIL
N.T.S.

PORT OF HOUSTON AUTHORITY

CONSULTANT:
CivilTech Engineering, Inc.

SEAL:
STATE OF TEXAS
ARTHUR M. PISANA
120237
LICENSED
PROFESSIONAL ENGINEER
10/02/2018

RECOMMENDED: DATE
MANAGER, ENGINEERING
APPROVED: DATE
PORT CONTRACT REPRESENTATIVE MANAGING DIRECTOR, ENGINEERING

PROJECT TITLE:
REHABILITATION OF DRAINAGE SYSTEM AT VOLKSWAGEN YARD AT TURNING BASIN TERMINAL

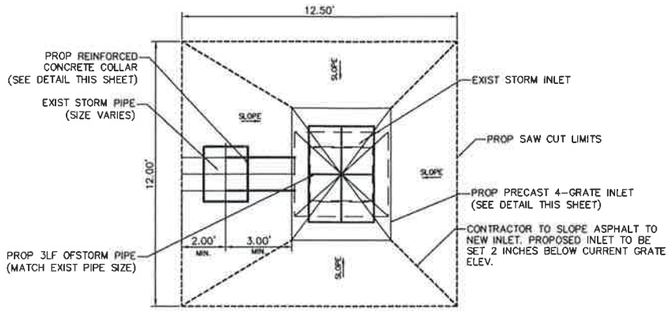
SHEET TITLE:
STORM WATER POLLUTION PREVENTION DETAILS

REV	DATE	DESCRIPTION

DESIGNER:	AP
CADD:	CDJ
CHECKER:	AP
DATE:	7-11-18
SCALE:	N.T.S.

DRAWING NO.
C10-D21-003

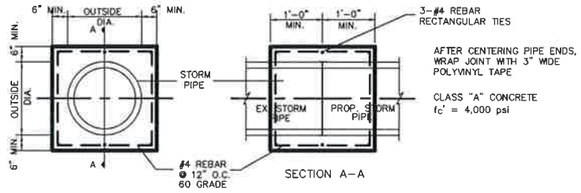
SHEET NO. C-006
REV. NO.



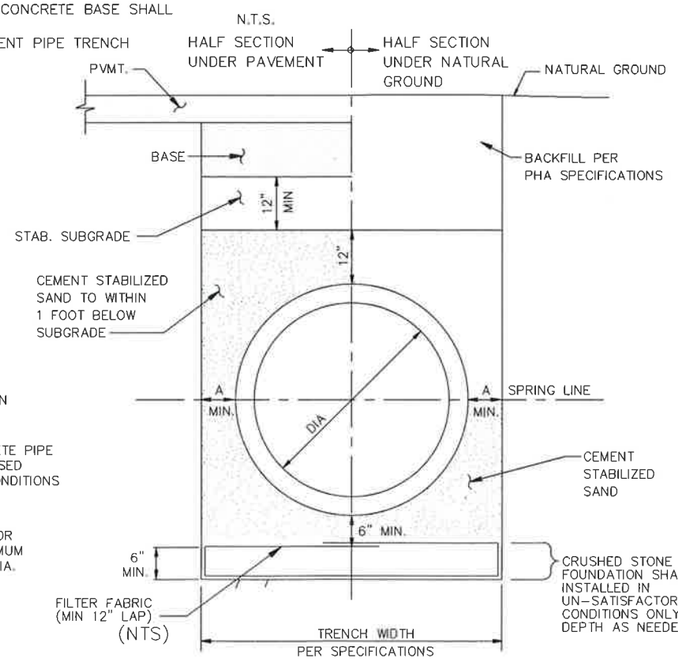
PAVING SAWCUT AT INLET REPLACEMENT
(NTS)

NOTES:
1. ENCLOSE WORK AREA WITH TRAFFIC BARRIERS ALLOW FOR PLENTY OF WORK SPACE AND STORAGE AREA FOR PROPOSED MATERIAL AND DEBRIS, CONTRACTOR SHALL COORDINATE WITH POH PRIOR TO SETTING UP ENCLOSED AREA.
2. SAW CUT AND REMOVE ASPHALT AND SUB-BASE MATERIAL, IF TEMPORALLY STORING ON SITE PLACE DISCARD MATERIAL IN AN CONTAINMENT BARRIER, SEE SECTION 01 56 13.00.
3. REMOVE INLET AND BEDDING MATERIAL.
4. SAW CUT EXISTING PIPE AND REMOVE.
5. SET BEDDING FOR PROPOSED INLET.
6. SET BEDDING FOR PIPE AND CONNECT PROPOSED PIPE TO EXISTING PIPE WITH A REINFORCED CONCRETE COLLAR.
7. BACKFILL PIPE AND INLET.
8. PLACE SUB BASE MATERIAL AND COMPACT.
9. REPLACE HOT MIX ASPHALT WHERE EXISTING PAVEMENT WAS REMOVED FOR INLET CONSTRUCTION, MATCH EXISTING GRADES.
10. DIMENSIONS SHOWN ARE SUGGESTED, CONTRACTOR TO CONFIRM AREA NEEDED TO REPLACE INLET.
11. CONTRACTOR TO REPLACE ANY PAVEMENT STRIPING DAMAGED OR REMOVED DURING CONSTRUCTION.

NOTES:
1. DEPTH OF MANHOLE DETERMINES SECTIONS REQUIRED.
2. PRECAST CONCRETE RINGS SHALL BE PROVIDED FOR A COMBINED ADJUSTMENT HEIGHT OF AT LEAST 6". THE TOTAL HEIGHT OF THE ADJUSTMENT RINGS SHALL NOT EXCEED 1'-6".
3. MANHOLE SHALL BE DESIGNED FOR LOADING CONDITIONS, ACCORDING TO LOCATION.
4. MANHOLE DROP AND INTERSECTING PIPES SHALL BE INSTALLED ONLY WHEN CALLED FOR IN PLAN AND PROFILE DRAWING.
5. SEAT MANHOLE FRAME IN SEALANT.
6. ECCENTRIC PRECAST CONCRETE MANHOLE MAY BE USED. (OPTIONAL)
7. OMIT CEMENT MORTAR WHEN MANHOLE IS LOCATED IN PAVED AREAS.
8. MIN. REINFORCING IN THE PRECAST CONCRETE BASE SHALL BE #5 @ 8" EW.
9. PROVIDE BACKFILL TO MATCH ADJACENT PIPE TRENCH BACKFILL.



CONCRETE JOINT COLLAR
SCALE: 1" = 1'-6"



(NTS)

PIPE AND BEDDING TO BE PLACED IN DRY TRENCH ONLY.

THE METHOD OF INSTALLING CONCRETE PIPE STORM SEWERS SHOWN SHALL BE USED FOR ALL LOCATIONS WHERE SOIL CONDITIONS CONFORM TO REQUIREMENTS IN SPECIFICATIONS, EXCEPT AS NOTED.

DIMENSIONS A TO BE MINIMUM 6" FOR PIPE LESS THAN 48" DIA. AND MINIMUM 12" FOR PIPE GREATER THAN 48" DIA.

STORM SEWER BEDDING DETAIL
(NTS)

NOTES:
1. DIFFERENT HEIGHT OF BODIES ARE AVAILABLE BY REQUEST FROM MANUFACTURER.

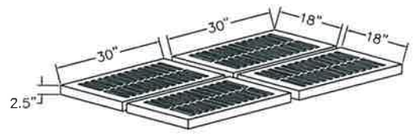
(A) C.I. GRATES

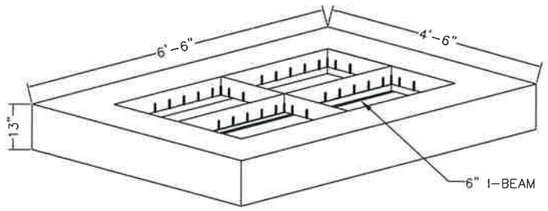
WEIGHT – 160 lb EA.
ITEM# – 7103500

SPECIFICATIONS
1. CONCRETE HAS A DESIGN STRENGTH OF 5000 PSI AT 28 DAYS
2. STEEL REINFORCEMENT: ASTM A-615 GRADE 60 OR ASTM A-497 WELDED WIRE FABRIC.
3. LOADING: DESIGNED FOR H20 LOADING.
4. C.I. CASTINGS: ASTM A-48, CLASS 30/35.

INLET TOP W. 4 FRAMES

WEIGHT – 2025 lb
ITEM# – 1207620

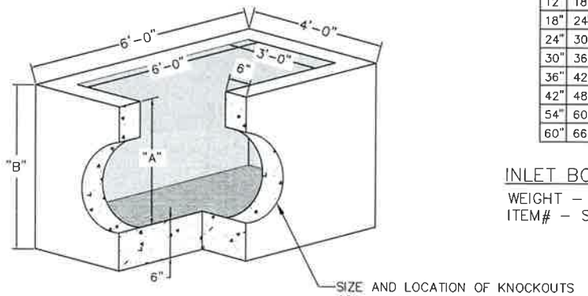




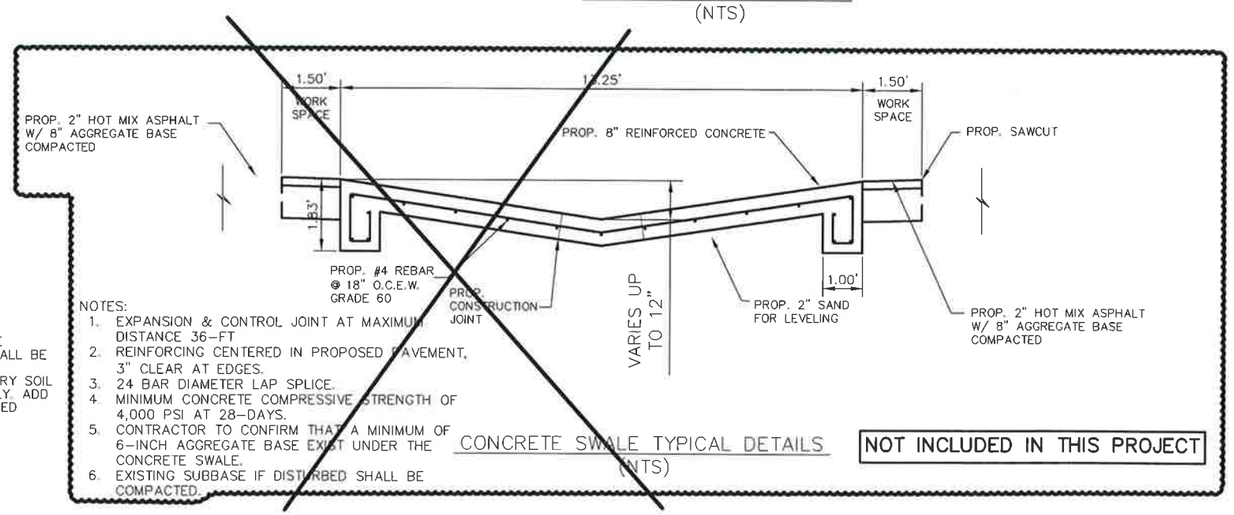
BODY			
A	B	WEIGHT	ITEM#
6"	12"	2475 lbs	1204160
12"	18"	3150 lbs	1204200
18"	24"	3825 lbs	1204220
24"	30"	4500 lbs	1204280
30"	36"	5175 lbs	1204320
36"	42"	5850 lbs	1204360
42"	48"	6525 lbs	1204400
54"	60"	7845 lbs	1204460
60"	66"	8500 lbs	1204480

INLET BODY

WEIGHT – SEE TABLE
ITEM# – SEE TABLE



3' X 5' 4-GRATE INLET
(NTS)



NOTES:
1. EXPANSION & CONTROL JOINT AT MAXIMUM DISTANCE 36-FT
2. REINFORCING CENTERED IN PROPOSED PAVEMENT, 3" CLEAR AT EDGES.
3. 24 BAR DIAMETER LAP SPLICE.
4. MINIMUM CONCRETE COMPRESSIVE STRENGTH OF 4,000 PSI AT 28-DAYS.
5. CONTRACTOR TO CONFIRM THAT A MINIMUM OF 6-INCH AGGREGATE BASE EXIST UNDER THE CONCRETE SWALE.
6. EXISTING SUBBASE IF DISTURBED SHALL BE COMPACTED.

CONCRETE SWALE TYPICAL DETAILS
(NTS)

NOT INCLUDED IN THIS PROJECT

PORT OF HOUSTON AUTHORITY

CONSULTANT:
CivilTech Engineering, Inc.

SEAL:
STATE OF TEXAS
ARTHUR M. PISANA
120237
LICENSED
PROFESSIONAL ENGINEER
10/02/2018

RECOMMENDED: DATE
MANAGER, ENGINEERING
APPROVED: DATE
PORT CONTRACT REPRESENTATIVE MANAGING DIRECTOR, ENGINEERING

PROJECT TITLE:
REHABILITATION OF DRAINAGE SYSTEM AT VOLKSWAGEN YARD AT TURNING BASIN TERMINAL

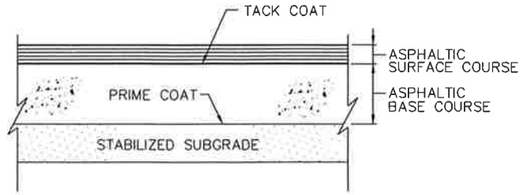
SHEET TITLE:
STORM SEWER DETAILS

REV	DATE	DESCRIPTION

DESIGNER:	AP
CADD:	CDJ
CHECKER:	AP
DATE:	7-11-18
SCALE:	

DRAWING NO.
C10-D21-003

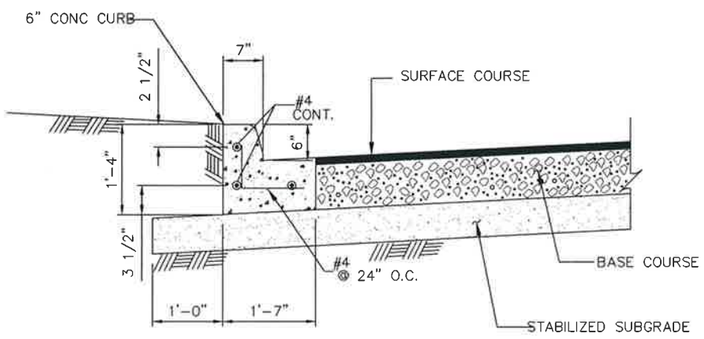
SHEET NO. C-007
REV. NO.



A TYPICAL ASPHALT SECTION

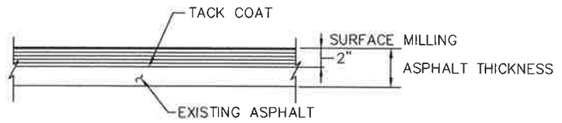
N.T.S.

NOTE TO ENGINEER:
ACTUAL PAVEMENT THICKNESS TO BE DETERMINED BY GEOTECHNICAL ANALYSIS.



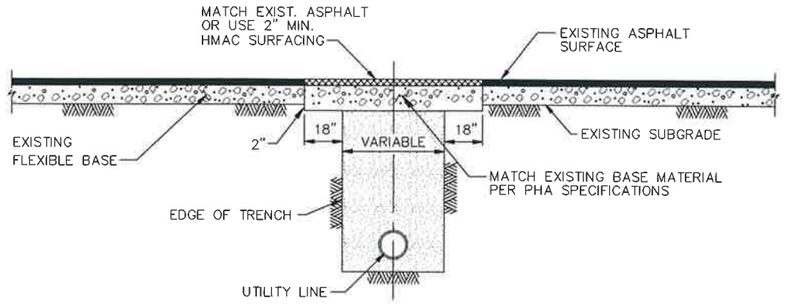
B PAVEMENT WITH CURB & GUTTER SECTION

N.T.S.

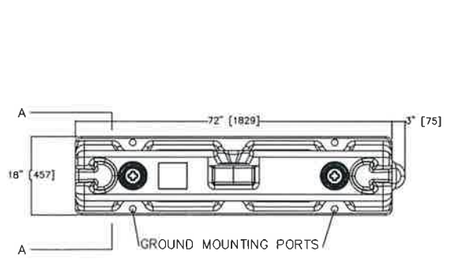


C ASPHALT RESURFACING

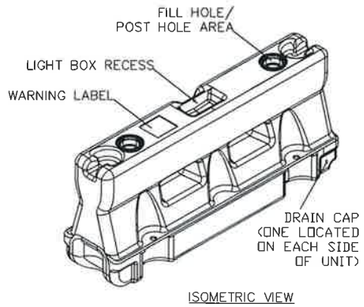
N.T.S.



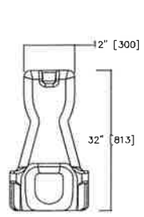
ASPHALT PAVEMENT PATCH OVER UTILITY LINE



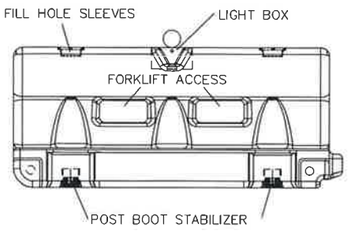
PLAN VIEW



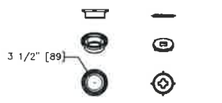
ISOMETRIC VIEW



SECTION A-A



ELEVATION VIEW



FILL HOLE SLEEVE & CAP

COUPLER

YODOCK METROPOLITAN BARRICADE SWM13

SPECIFICATIONS:

- 6' LENGTH
- 24" WIDTH
- 46" HEIGHT
- EMPTY 130 LBS
- FULL 1,500 LBS

NOTES:

1. CONTRACTOR SHALL USE YODOCK METROPOLITAN BARRICADE SWM13 OR APPROVED EQUAL.
2. CONTRACTOR IS RESPONSIBLE FOR MOVING BARRICADE FROM ONE LOCATION TO ANOTHER.
3. CONTRACTOR SHALL COORDINATE WITH PDHA PROJECT MANAGER AND VOLKSWAGEN YARD PROJECT MANAGER PRIOR TO PLACING BARRICADES.

PORT OF HOUSTON AUTHORITY

CONSULTANT:
CivilTech Engineering, Inc.

SEAL:
STATE OF TEXAS
ARTHUR M. PISANA
120237
LICENSED
PROFESSIONAL ENGINEER
10/03/2018

RECOMMENDED: DATE
MANAGER, ENGINEERING

APPROVED: DATE
PORT CONTRACT REPRESENTATIVE MANAGING DIRECTOR, ENGINEERING

PROJECT TITLE:
REHABILITATION OF DRAINAGE SYSTEM AT VOLKSWAGEN YARD AT TURNING BASIN TERMINAL

SHEET TITLE:
MISCELLANEOUS DETAILS

REV	DATE	DESCRIPTION

DESIGNER:	AP
CADD:	CDJ
CHECKER:	AP
DATE:	7-11-18
SCALE:	

DRAWING NO.: C10-D21-003
SHEET NO.: C-008
REV. NO.: