

**REVIEW BY FORT BEND COUNTY  
COMMISSIONERS COURT**

**Fort Bend County  
Engineering Department**  
301 Jackson Suite 401  
Richmond, Texas 77469  
281.633.7500  
Permits@fortbendcountytx.gov

Right of Way Permit

Commercial Driveway Permit

Permit No: 2017-17465

**Applicant:** Barnier Building Systems, Inc.

**Job Location Site:** 15151 West Drive, Houston, TX 77053

**Bond No.**                      **Date of Bond:** 12/18/2017 **Amount:** \$5,000.00

The above applicant came to make use of certain Fort Bend County property subject to, "The Order Regulating the Laying, Construction, Maintenance, and Repair of Buried Cables, Conduits, and Pole Lines, In, Under, Across or Along Roads, Streets, Highways, and Drainage Ditches in Fort Bend County, Texas, Under the Jurisdiction of the Commissioners Court of Fort Bend County, Texas," as passed by the Commissioners Court of Fort Bend County, Texas, of the Minutes of the Commissioners Court of Fort Bend County, Texas, to the extent that such order is not inconsistent with Chapter 181, Vernon's Texas Statutes and Codes Annotated.

**Notes:**

1. Evidence of review by the Commissioners Court must be kept on the job site and failure to do so constitutes grounds for job shutdown.
2. Written notices are required:
  - a. 48 hours in advance of construction start up, and
  - b. When construction is completed and ready for final inspection, submit notification to Permit Administrator thru MyGovernmentOnline.org portal.
3. This permit expires one (1) year from date of permit if construction has not commenced.

On this 6th day of March, 2018, Upon Motion of Commissioner Meyers, seconded by Commissioner Morales, duly put and carried, it is ORDERED, ADJUDGED AND DECREED that said notice of said above purpose is hereby acknowledged by the Commissioners Court of Fort Bend County, Texas, and that said notice be placed on record according to the regulation order thereof.

**Signature**

Presented to Commissioners Court and approved.

By: Charles O. Ay  
for County Engineer

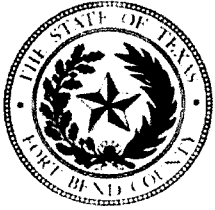
Date Recorded 3-12-2018 Comm. Court No. 12A

By: N/A

Clerk of Commissioners Court

By: \_\_\_\_\_  
Drainage District Engineer/Manager

By: Jonda Willis  
Deputy



**PERMIT APPLICATION REVIEW FORM FOR  
CABLE, CONDUIT, AND POLE LINE ACTIVITY  
IN FORT BEND COUNTY**

**Fort Bend County  
Engineering Department**  
301 Jackson Suite 401  
Richmond, Texas 77469  
281.633.7500  
Permits@fortbendcountytx.gov

- Right of Way Permit  
 Commercial Driveway Permit

Permit No: 2017-17465

The following "Notice of Proposed Cable, Conduit, and/or Pole Line activity in Fort Bend County" and accompanying attachments have been reviewed and the notice conforms to appropriate regulations set by Commissioner's Court of Fort Bend County, Texas.

**(1) COMPLETE APPLICATION FORM:**

- a. Name of road, street, and/or drainage ditch affected.  
 b. Vicinity map showing course of directions  
 c. Plans and specifications

**(2) BOND:**

- County Attorney, approval when applicable.
- Perpetual bond currently posted.      Bond No: \_\_\_\_\_ Amount: \_\_\_\_\_
- Performance bond submitted.      Bond No: ██████████      Amount: \$5,000.00
- Cashier's Check      Check No: \_\_\_\_\_ Amount: \_\_\_\_\_

**(3) DRAINAGE DISTRICT APPROVAL (WHEN APPLICABLE):**

\_\_\_\_\_  
Drainage District Approval

\_\_\_\_\_  
Date

**We have reviewed this project and agree it meets minimum requirements.**

*Charles O. Ay*

\_\_\_\_\_  
Permit Administrator

2/23/2018

\_\_\_\_\_  
Date



**PERFORMANCE BOND COVERING ALL CABLE, CONDUIT AND/OR POLE LINE  
ACTIVITY IN, UNDER, ACROSS OR ALONG FORT BEND COUNTY ROAD**

**AUTHORIZED**

BOND NO. \_\_\_\_\_

THE STATE OF TEXAS §

**KNOW ALL MEN BY THESE PRESENTS:**

COUNTY OF FORT BEND §

THAT WE, Barnier Building Systems, Inc. whose address is 1105 Northville, Houston, TX 77038 Texas, hereinafter called the Principal, And Western Surety Company, a Corporation existing under and by virtue of the laws of the state of South Dakota and authorized to do an indemnifying business in the state of Texas, and whose principal office is located at P.O. Box 5077, Sioux Falls, SD 57117-5077, whose officer residing in the State of Texas, authorized to accept service in all suits and actions brought whining said state is Ron Bartulla and Whose address is 5151 San Felipe, Suite 1800, Houston, TX 77056, hereinafter called the Surety, and held and firmly bound unto, Robert e. Hebert, County Judge of Fort Bend County, Texas, or his successors in office, in the full sum of Five Thousand and No/100 ----- Dollars (\$5,000.00 -----) current, lawful money of the United States of America, to be paid to said Robert E. Hebert, County Judge of Fort Bend County, Texas, or his successors in office, to which payment well and truly to be made and done, we, the undersigned, bind ourselves and each of us, our heirs, executors, administrators, successors, assigns, and legal representatives, jointly and severally, by these presents.

THE CONDITION OF THIS BOND IS SUCH THAT, WHEREAS, the above bounden principal contemplates laying, constructing, maintaining and/or repairing one or more cables, conduits, and/or pole lines in, under, across and/or along roads, streets and highways, commercial driveway and median openings or modifications in the County of Fort Bend, and the State of Texas, under the jurisdiction of the Commissioners' Court of Fort Bend County, Texas, pursuant to the Commissioners' Court order adopted on the 1st day of December, A.D. 1980, recorded in Volume 13, of the Commissioners' Court Minutes of Fort Bend County, Texas, regulating same, which Commissioners' Court order is hereby referred to and made a part hereof for all purposes as though fully set out herein;

AND WHEREAS, the principal desires to provide Fort Bend County with a performance bond covering all such cable, conduit and/or pole line activity, commercial driveway and median openings or modifications;

NOW, THEREFORE, if the above bounden principal shall faithfully perform all its cable, conduit and/or pole line activity (including, but not limited to the laying, construction, maintenance and/or repair of cables, conduits and/or pole lines) in, under, across and/or along roads, streets and highways, commercial driveway and median openings or modifications in the County of Fort Bend and State of Texas, under the jurisdiction of the Commissioners Court of Fort Bend County, Texas, pursuant to and in accordance with minimum requirements and conditions of the above mentioned Commissioners' Court order set forth and specified to be by said principal done and performed, at the time and in the manner therein specified, and shall pay over and make good and reimburse Fort Bend County, all loss and damages which Fort Bend County may sustain by reason of any failure or default on the part of said principal, then this obligation shall be null and void, otherwise to remain in full force and effect.

This bond is payable at the County Courthouse in the County of Fort Bend and State of Texas.

It is understood that at any time Fort Bend County deems itself insecure under this bond, it may require further and/or additional bonds of the principal.

EXECUTED this 18th day of December, 20 17.

Barnier Building Systems, Inc.  
PRINCIPAL

[Signature]  
BY

Western Surety Company  
SURETY

[Signature]  
BY Gloria Villa, Attorney-in-Fact

CCM 3-06-2018 # 12A  
Fort Bend County Clerk  
Return Admin Serv Coord RAC  
Permit# 2017-17465

# Western Surety Company

## POWER OF ATTORNEY APPOINTING INDIVIDUAL ATTORNEY-IN-FACT

Know All Men By These Presents, That WESTERN SURETY COMPANY, a South Dakota corporation, is a duly organized and existing corporation having its principal office in the City of Sioux Falls, and State of South Dakota, and that it does by virtue of the signature and seal herein affixed hereby make, constitute and appoint

**Sue Kohler, David R Groppell, Beverly A Ireland, Sharen Groppell, Roxanne G Brune, Sharon Cavanaugh, Kurt A Risk, Francine Hay, Gloria Villa, Individually**

of Houston, TX, its true and lawful Attorney(s)-in-Fact with full power and authority hereby conferred to sign, seal and execute for and on its behalf bonds, undertakings and other obligatory instruments of similar nature

### - In Unlimited Amounts -

and to bind it thereby as fully and to the same extent as if such instruments were signed by a duly authorized officer of the corporation and all the acts of said Attorney, pursuant to the authority hereby given, are hereby ratified and confirmed.

This Power of Attorney is made and executed pursuant to and by authority of the By-Law printed on the reverse hereof, duly adopted, as indicated, by the shareholders of the corporation.

In Witness Whereof, WESTERN SURETY COMPANY has caused these presents to be signed by its Vice President and its corporate seal to be hereto affixed on this 1st day of August, 2016.

WESTERN SURETY COMPANY

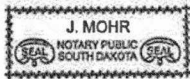


*Paul T. Bruflat*  
Paul T. Bruflat, Vice President

State of South Dakota }  
County of Minnehaha } ss

On this 1st day of August, 2016, before me personally came Paul T. Bruflat, to me known, who, being by me duly sworn, did depose and say: that he resides in the City of Sioux Falls, State of South Dakota; that he is the Vice President of WESTERN SURETY COMPANY described in and which executed the above instrument; that he knows the seal of said corporation; that the seal affixed to the said instrument is such corporate seal; that it was so affixed pursuant to authority given by the Board of Directors of said corporation and that he signed his name thereto pursuant to like authority, and acknowledges same to be the act and deed of said corporation.

My commission expires  
June 23, 2021



*J. Mohr*  
J. Mohr, Notary Public

### CERTIFICATE

I, L. Nelson, Assistant Secretary of WESTERN SURETY COMPANY do hereby certify that the Power of Attorney hereinabove set forth is still in force, and further certify that the By-Law of the corporation printed on the reverse hereof is still in force. In testimony whereof I have hereunto subscribed my name and affixed the seal of the said corporation this 18th day of December, 2017.



WESTERN SURETY COMPANY

*L. Nelson*  
L. Nelson, Assistant Secretary

**Authorizing By-Law**

**ADOPTED BY THE SHAREHOLDERS OF WESTERN SURETY COMPANY**

This Power of Attorney is made and executed pursuant to and by authority of the following By-Law duly adopted by the shareholders of the Company.

Section 7. All bonds, policies, undertakings, Powers of Attorney, or other obligations of the corporation shall be executed in the corporate name of the Company by the President, Secretary, and Assistant Secretary, Treasurer, or any Vice President, or by such other officers as the Board of Directors may authorize. The President, any Vice President, Secretary, any Assistant Secretary, or the Treasurer may appoint Attorneys in Fact or agents who shall have authority to issue bonds, policies, or undertakings in the name of the Company. The corporate seal is not necessary for the validity of any bonds, policies, undertakings, Powers of Attorney or other obligations of the corporation. The signature of any such officer and the corporate seal may be printed by facsimile.



# Western Surety Company

Figure: 28 TAC §1.601(a)(3)

## 1 IMPORTANT NOTICE

To obtain information or make a complaint:

2 You may contact Western Surety Company at 605-336-0850.

3 You may call Western Surety Company's toll-free telephone number for information or to make a complaint at:

**1-800-331-6053**

4 You may also write to Western Surety Company at:

P.O. Box 5077  
Sioux Falls, SD 57117-5077

5 You may contact the Texas Department of Insurance to obtain information on companies, coverages, rights or complaints at:

**1-800-252-3439**

6 You may write the Texas Department of Insurance:

P.O. Box 149104  
Austin, TX 78714-9104  
Fax: (512) 475-1771  
Web: <http://www.tdi.state.tx.us>  
E-Mail: [ConsumerProtection@tdi.state.tx.us](mailto:ConsumerProtection@tdi.state.tx.us)

## 7 PREMIUM OR CLAIM DISPUTES:

Should you have a dispute concerning your premium or about a claim you should contact Western Surety Company first. If the dispute is not resolved, you may contact the Texas Department of Insurance.

## 8 ATTACH THIS NOTICE TO YOUR POLICY:

This notice is for information only and does not become a part or condition of the attached document.

## AVISO IMPORTANTE

Para obtener informacion o para someter una queja:

Puede comunicarse con Western Surety Company al 605-336-0850.

Usted puede llamar al numero de telefono gratis de Western Surety Company's para informacion o para someter una queja al:

**1-800-331-6053**

Usted tambien puede escribir a Western Surety Company:

P.O. Box 5077  
Sioux Falls, SD 57117-5077

Puede comunicarse con el Departamento de Seguros de Texas para obtener informacion acerca de companias, coberturas, derechos o quejas al:

**1-800-252-3439**

Puede escribir al Departamento de Seguros de Texas:

P.O. Box 149104  
Austin, TX 78714-9104  
Fax: (512) 475-1771  
Web: <http://www.tdi.state.tx.us>  
E-Mail: [ConsumerProtection@tdi.state.tx.us](mailto:ConsumerProtection@tdi.state.tx.us)

## DISPUTAS SOBRE PRIMAS O RECLAMOS:

Si tiene una disputa concerniente a su prima o a un reclamo, debe comunicarse con el Western Surety Company primero. Si no se resuelve la disputa, puede entonces comunicarse con el departamento (TDI).

## UNA ESTE AVISO A SU POLIZA: Este aviso es

solo para proposito de informacion y no se convierte en parte o condicion del documento adjunto.

FILED AND RECORDED  
OFFICIAL PUBLIC RECORDS

*Laura Richard*

Laura Richard, County Clerk

Fort Bend County Texas

March 09, 2018 02:25:03 PM

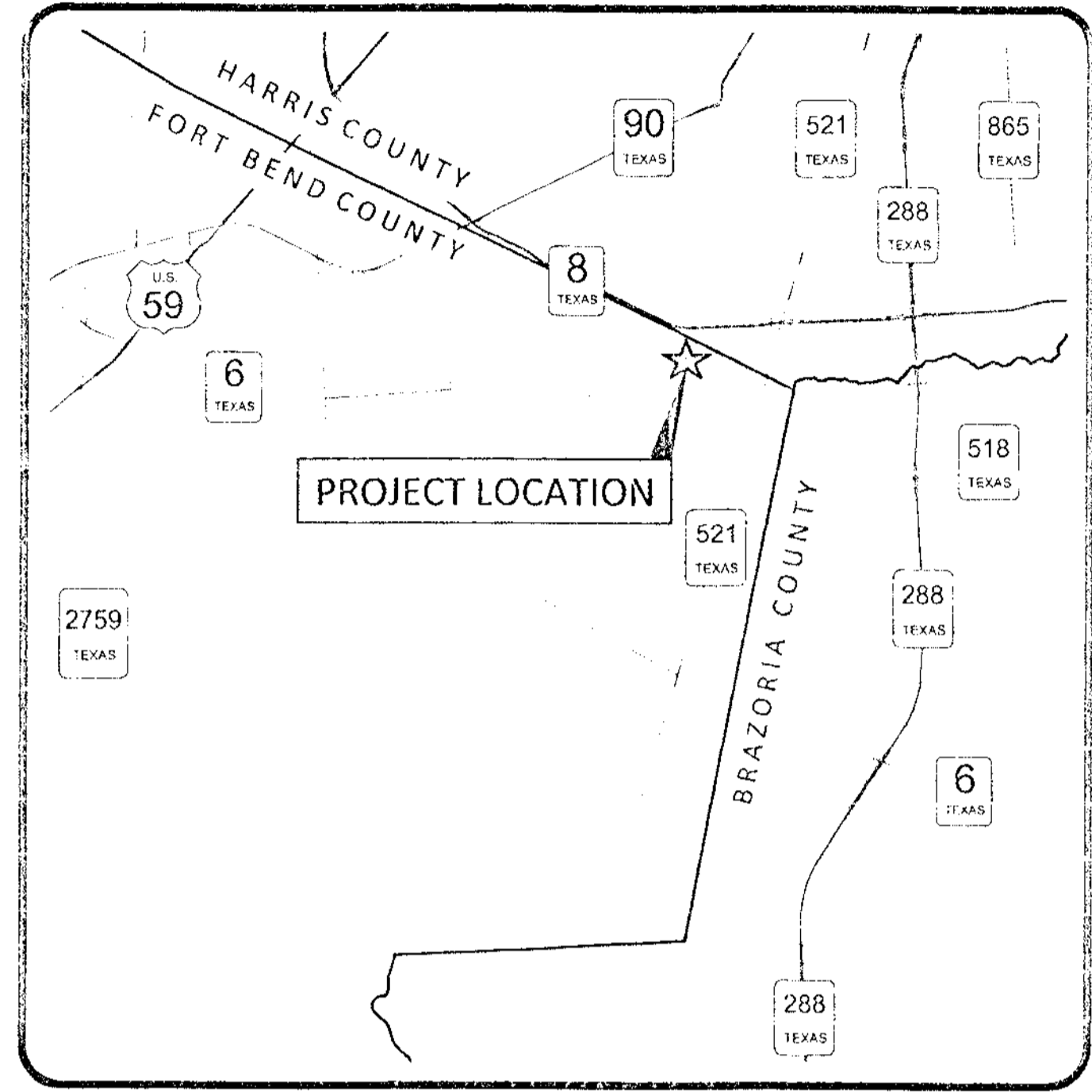


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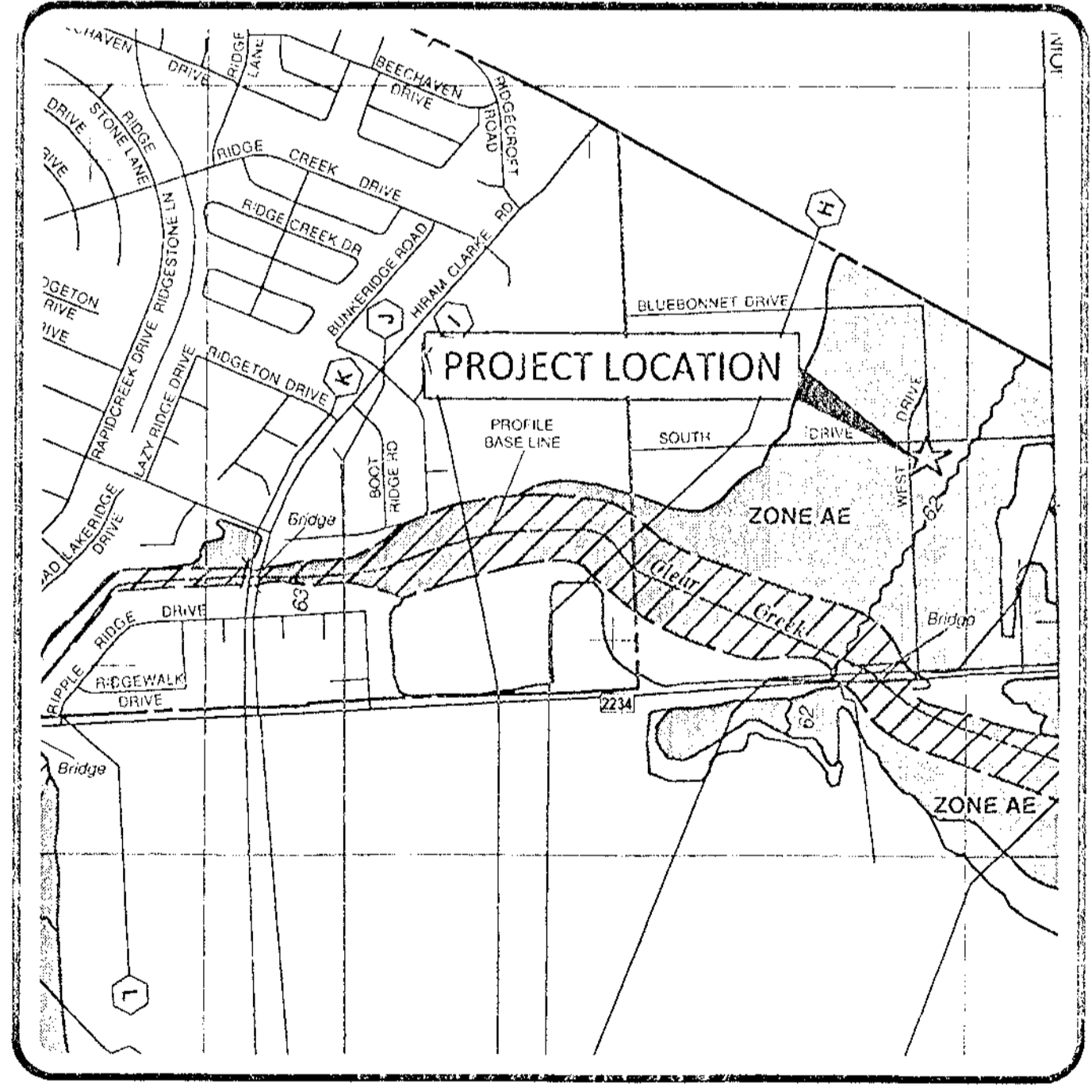
CR1

**2018025189**

# CIVIL PLANS FOR THE CONSTRUCTION OF SUNBURST TRADING



**LOCATION MAP**  
NTS



**FLOOD PLAIN MAP**

0 1000 2000  
SCALE: 1" = 1000' (1" = 2000')

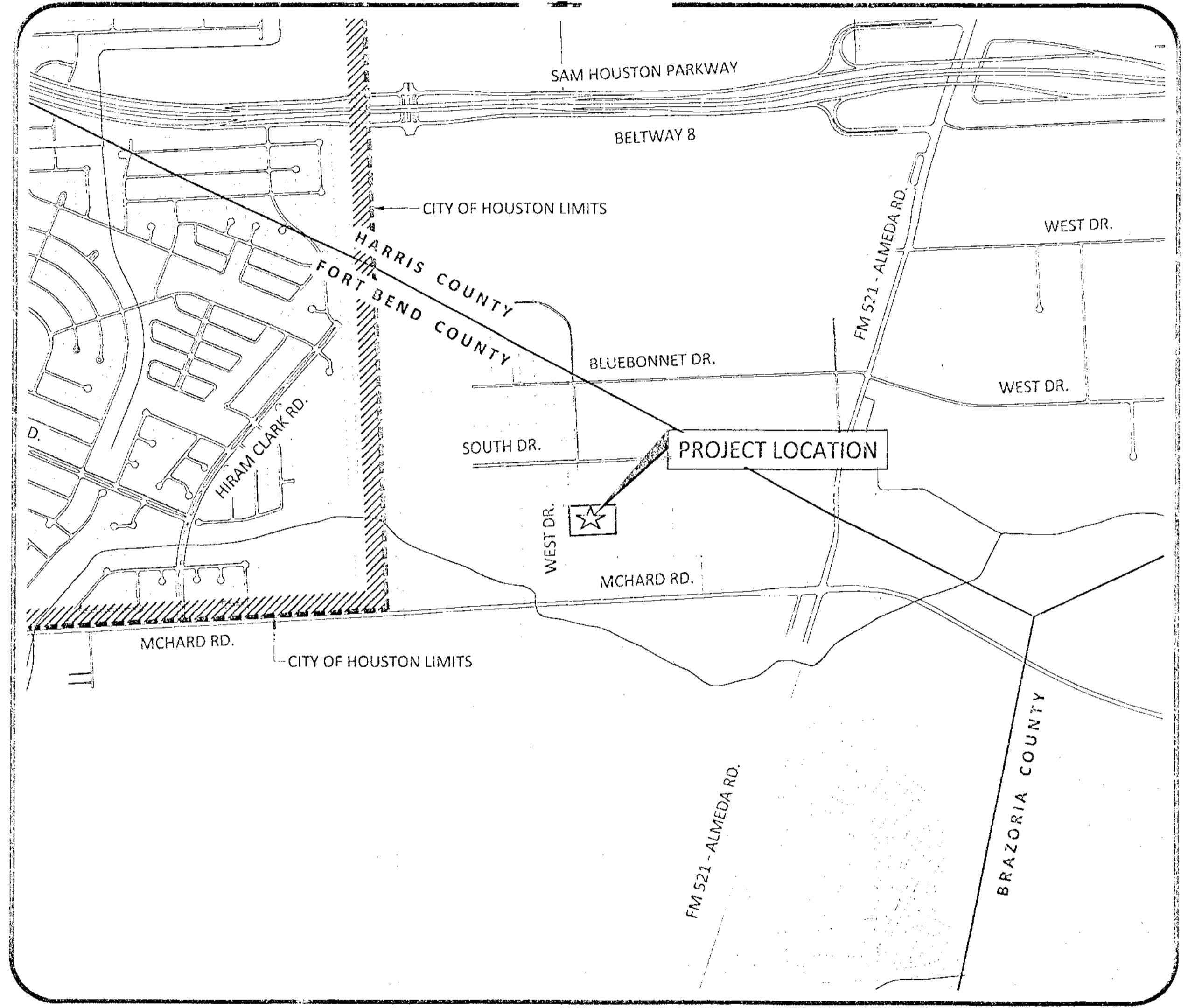
ACCORDING TO THE FEDERAL EMERGENCY MANAGEMENT AGENCY  
FLOOD INSURANCE RATE MAP COMMUNITY  
PANEL No. 48157C0305L DATED: 04/02/2014  
THIS TRACT LIES WITHIN ZONE "A", AREAS WITHIN THE 100 YEAR FLOOD PLAIN  
THE BASE FLOOD ELEVATION IS: 62.00±

**OWNER INFORMATION:**

SIVADI INTEREST, LLC  
ATTN: SERPIAN DAVIS  
1711 HATTERAS CT.  
SUGARLAND, TEXAS 77479

**PROJECT LOCATION:**

15151 WEST DRIVE  
HOUSTON, TEXAS 77053



**VICINITY MAP**

FORT BEND COUNTY, TEXAS  
KEY MAP: 612 A

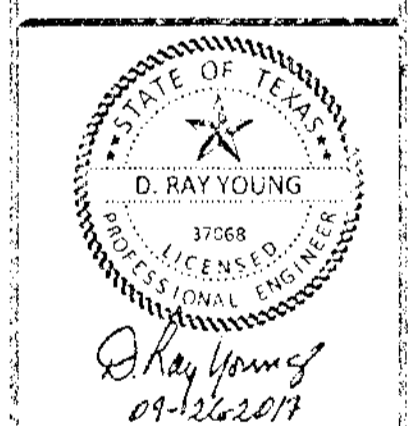
0 1000 2000  
SCALE: 1" = 1000' (1" = 2000')

SHEET INDEX	
SHEET NUMBER	SHEET TITLE
01	COVER SHEET
02	SITE PLAN
03	PAVING PLAN
04	DRAINAGE AREA PLAN
05	GRADING & DRAINAGE PLAN
06	MITIGATION PLAN
07	CIVIL DETAILS 1
08	CIVIL DETAILS 2
09	STORMWATER POLLUTION PREVENTION PLAN
10	STORMWATER POLLUTION PREVENTION DETAILS
11	TRAFFIC CONTROL PLAN
12	GENERAL NOTES

REVISION	DATE
DESCRIPTION	M/D/YY

**WATER ENGINEERS, INC.**  
Water & Wastewater Treatment Consultants  
TEXAS BOARD OF PROFESSIONAL ENGINEERS FIRM No. 2066  
27230 HUFFMEISTER ROAD  
CYPRESS, TEXAS 77429  
TEL: 281-373-0500  
FAX: 281-373-1113

CIVIL PLANS FOR THE CONSTRUCTION OF  
SUNBURST TRADING  
15151 WEST DRIVE  
HOUSTON, TEXAS 77053



FORT BEND COUNTY ENGINEER

ENGINEER: Richard W. Stolleis, P.E.  
for Richard W. Stolleis, P.E.

DATE: 12/11/17

THESE SIGNATURES ARE VOID IF CONSTRUCTION HAS  
NOT COMMENCED IN (1) YEAR FROM DATE OF APPROVAL

APPROVED: [Signature]  
Development Coordinator

DATE: 12/11/17

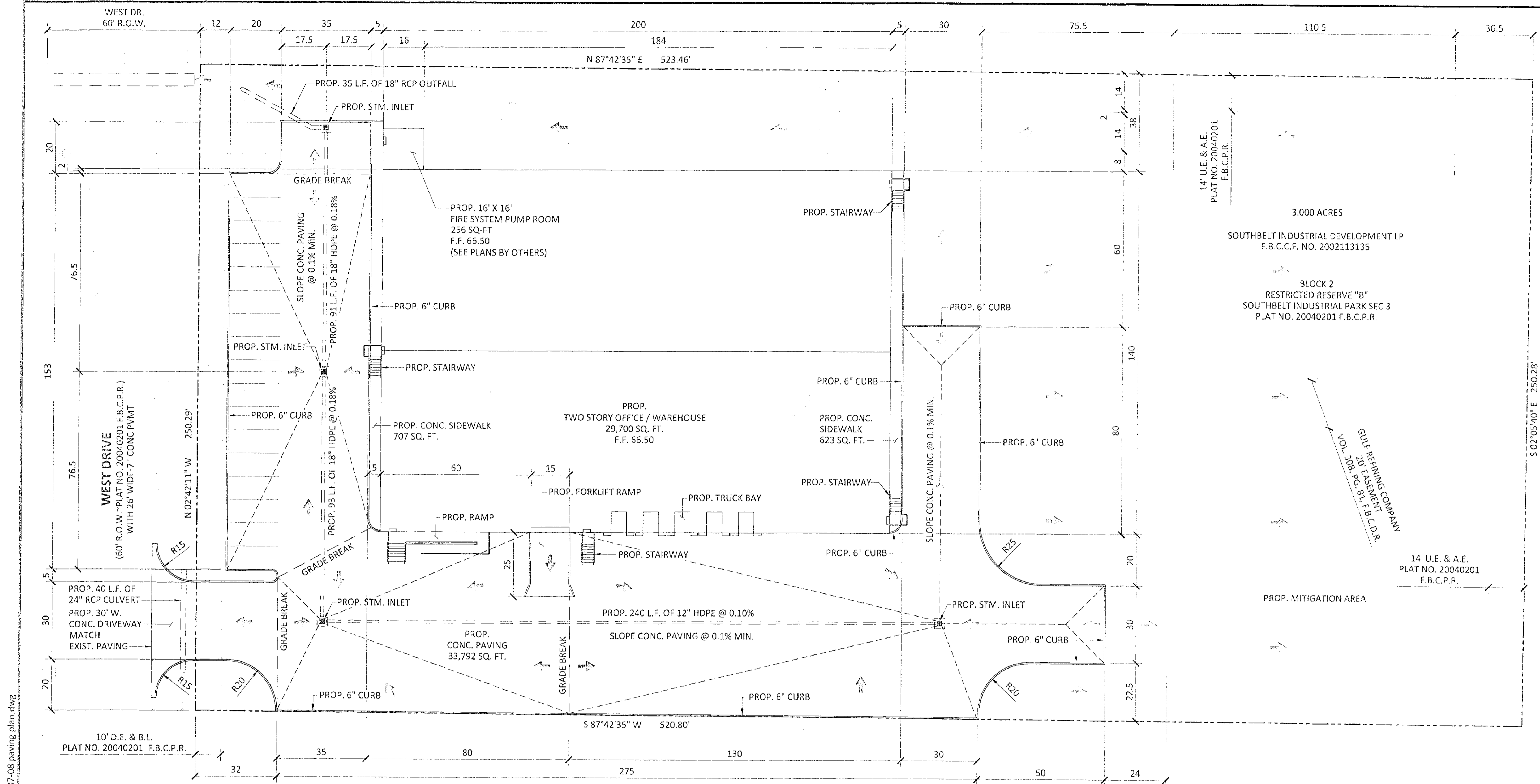
SHEET NAME:  
**COVER SHEET**

DRAWN BY: JLW  
CHECKED BY: DRY  
PROJECT No.: 5759.1  
DATE: 9/26/2017  
SHEET No.:  
**01 OF 12**

CONTRACTOR SHALL COORDINATE ALL WORK WITHIN FORT BEND COUNTY ROAD RIGHT OF WAY OF WEST DRIVE WITH FORT BEND COUNTY ROAD AND BRIDGE DEPARTMENT, 281-342-4513

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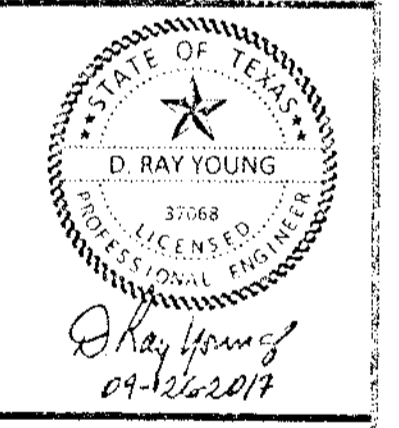




REVISION	DATE
DESCRIPTION	M/D/Y

**WATERENGINEERS, INC.**  
 Water & Wastewater Treatment Consultants  
 TEXAS BOARD OF PROFESSIONAL ENGINEERS FIRM NO. 2066  
 17230 HUFFMEISTER ROAD  
 CYPRESS, TEXAS 77429  
 TEL: 281-373-0500  
 FAX: 281-373-1113

**CIVIL PLANS FOR THE CONSTRUCTION OF  
 SUNBURST TRADING**  
 15151 WEST DRIVE  
 HOUSTON, TEXAS 77053



SHEET NAME:  
**PAVING PLAN**

DRAWN BY: JLW  
 CHECKED BY: DRY  
 PROJECT No.: 5759.1  
 DATE: 9/26/2017  
 SHEET No.: **03 OF 12**

**SITE DESCRIPTION:**  
 3,000 ACRES OF LAND LOCATED IN THE HENRY LEVERING SURVEY, ABSTRACT 279, FORT BEND COUNTY, TEXAS AND BEING A PORTION OF RESTRICTED RESERVE "B", BLOCK 2 OF SOUTHBELT INDUSTRIAL PARK SEC 3, RECORDED IN PLAT NO. 20040201 OF F.B.C.P.R.

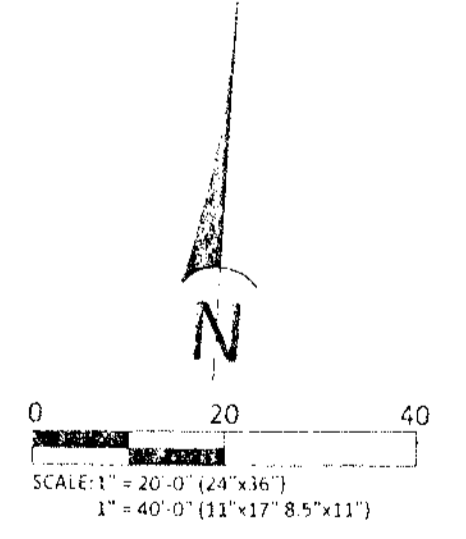
**FLOOD PLAIN:**  
 ACCORDING TO FEMA FLOOD INSURANCE RATE MAP (FIRM) NO. 48157C03051, MAP REVISED 04/02/2014, THE SURVEYED TRACT LIES IN ZONE AE, THE 100 YEAR FLOOD PLAIN ELEVATION APPEARS TO BE @ 62.0

**SURVEY INFORMATION:**  
 PROVIDED BY JH MERCER ENGINEERS

**TBM:**  
 IS THE TOP THE 60" RCP CULVERT LOCATED AT THE NORTH WEST CORNER OF THE SITE. ELEVATION = 60.26 (2001 ADJUSTED DATUM)

**BENCHMARK:**  
 FLOODPLAIN RM No. 010215, FROM SH 288 AT FM 2234: TRAVEL ± 3.25 MILE WEST ON FM 2234 TO CLEAR CREEK AND STATION ON RIGHT (NORTH). MONUMENT IS A BRASS DISC AT THE CENTER OF HEADWALL ON THE NORTH SIDE OF FM 2234. HORIZONTAL DATUM: NAD83, 2001 ADJUSTMENT. VERTICAL DATUM: NAVD88, 2001 ADJUSTMENT. ELEVATION 62.95.

CONTRACTOR SHALL COORDINATE ALL WORK WITHIN FORT BEND COUNTY ROAD RIGHT OF WAY OF WEST DRIVE WITH FORT BEND COUNTY ROAD AND BRIDGE DEPARTMENT, 281-342-4513



APPROVED: *[Signature]*  
 Development Coordinator  
 DATE: 12/8/17

\\server\wei\current\jobs\5759.01\surburst trading\wei\current\07-08 paving plan.dwg

**SUNBURST TRADING**  
STORM SEWER CALCULATIONS  
LOT FULL ANALYSIS (TW=100-YR IN DITCVH)

RUN ID AREA	NODE U/S	NODE D/S	AREA (ac)	CUM. AREA (ac)	RUNOFF COEFF. C	SUM OF C*A	TIME OF CONC. CUMUL (min)	INTENSITY i (in/hr)	SUM OF FLOWS (cfs)	REACH LENGTH (ft)	DIAM OR RISE (in)	SPAN (in)	AREA (sf)	SLOPE (%)	MANNINGS "N"	FLOWLINE UP STREAM (ft)	FLOWLINE DOWN STREAM (ft)	ACTUAL VELOCITY (fps)	HYDRAULIC GRADIENT (%)	CHANGE IN HEAD (ft)	HYD GRAD UP STREAM (ft)	HYD GRAD DOWN STREAM (ft)	TOP OF GRATE ELEV. (ft)	COMMENT
<b>2 YEAR STORM EVENT - PROPOSED CONDITIONS</b>																								
A	Inlet A	Inlet B	0.57	0.57	0.85	0.48	10.00	5.38	2.89	240	12	0	0.79	0.10	0.011	58.96	58.72	2.35	0.467	1.12	63.62	62.50	62.50	not
B	Inlet B	Inlet C	0.34	0.90	0.85	0.77	11.17	5.15	4.39	93	18	0	1.77	0.10	0.011	58.72	58.63	2.61	0.124	0.12	62.50	62.38	62.50	OK
C	Inlet C	Inlet D	0.21	1.11	0.85	0.94	12.34	4.94	5.17	91	18	0	1.77	0.10	0.011	58.63	58.54	2.70	0.173	0.16	62.38	62.23	62.50	OK
D	Inlet D	Ditch 1A	0.35	1.46	0.85	1.24	13.52	4.74	6.55	35	18	0	1.77	0.10	0.013	58.54	58.50	2.53	0.387	0.14	62.23	62.09	62.50	OK



WEIR FLOW TO WEST ROAD COMMENCES WHEN HGL AT INLET B EXCEEDS 62.5FT. THIS CORRESPONDS TO 6.55CFS TOTAL RUNOFF

**SUNBURST TRADING**  
STORM SEWER CALCULATIONS  
100-YR (PEAK FLOW ANALYSIS)

RUN ID AREA	NODE U/S	NODE D/S	AREA (ac)	CUM. AREA (ac)	RUNOFF COEFF. C	SUM OF C*A	TIME OF CONC. CUMUL (min)	INTENSITY i (in/hr)	SUM OF FLOWS (cfs)
A	Inlet A	Inlet B	0.57	0.57	0.85	0.48	10.00	11.63	5.62
B	Inlet B	Inlet C	0.34	0.90	0.85	0.77	11.17	11.22	8.62
C	Inlet C	Inlet D	0.21	1.11	0.85	0.94	12.34	10.85	10.24
D	Inlet D	Ditch 1A	0.35	1.46	0.85	1.24	13.52	10.50	13.06

Q 100 = 13.06CFS  
Q MAX IN STM AT WEIR FLOW = 6.55 CFS  
Q DIFF = 6.51CFS (OUTBOUND WEIR FLOW)

TRAPEZOIDAL CHANNEL ANALYSIS  
NORMAL DEPTH COMPUTATION  
September 22, 2017

PROGRAM INPUT DATA	
DESCRIPTION	VALUE
Flow Rate (cfs)	6.51
Channel Bottom Slope (ft/ft)	0.065
Manning's Roughness Coefficient (n-value)	0.013
Channel Left Side Slope (horizontal/vertical)	2:0
Channel Right Side Slope (horizontal/vertical)	2:0
Channel Bottom Width (ft)	30.0

COMPUTATION RESULTS	
DESCRIPTION	VALUE
Normal Depth (ft)	6.05
Flow Velocity (fps)	4.14
Froude Number	3.196
Velocity Head (ft)	0.27
Energy Head (ft)	0.32
Cross-Sectional Area of Flow (sq ft)	1.57
Top Width of Flow (ft)	30.0

HYDROLOG Hydrolics for Windows, Version 1.24 Copyright (c) 1994  
Doddin & Associates, Inc., 5629 FM 1960 West, Suite 114, Houston, TX 77069  
Phone: (281)440-3737, Fax: (281)440-4742, Email: software@hydro.com  
All Rights Reserved.

**SITE DESCRIPTION:**  
3.000 ACRES OF LAND LOCATED IN THE HENRY LEVERING SURVEY, ABSTRACT 279, FORT BEND COUNTY, TEXAS AND BEING A PORTION OF RESTRICTED RESERVE "B", BLOCK 2 OF SOUTHBELT INDUSTRIAL PARK SEC 3, RECORDED IN PLAT NO. 20040201 OF F.B.C.P.R.

**FLOOD PLAIN:**  
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PRIVATE UTILITY LINES SHOWN

NOTES:  
AT LEAST 48 HOURS BEFORE EXCAVATING IN STREET R.U.W. OR BASEMENT, CALL TOLL FREE 800-451-7233 CENTER LINE 223-4567 OR 1-800-400-4744

SOUTHBELT INDUSTRIAL PARK SECTION 3

SITE DRAINAGE

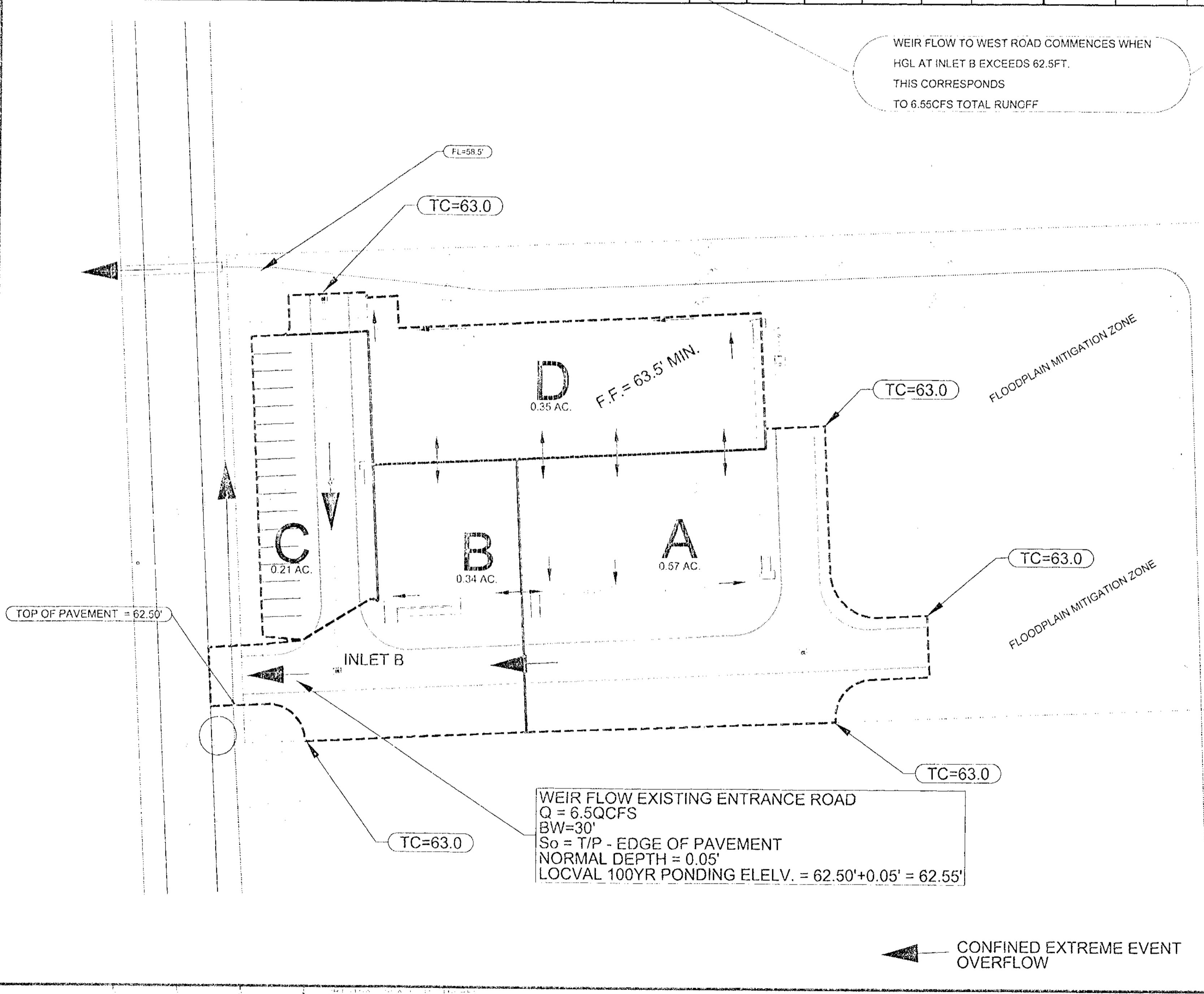
SUNBURST TRADING 100YR PONDING ANALYSIS

**Site Civil Engineering LP**  
Hydrology, Hydraulics, Engineering, Permitting

FILE NO: \_\_\_\_\_  
DRAWING NO: \_\_\_\_\_  
DATE: 9/25/2017

APPROVED: *Lawrence N. Lopez*  
Development Coordinator

DATE: 9/25/2017



WEIR FLOW EXISTING ENTRANCE ROAD  
Q = 6.5QCFS  
BW=30'  
So = T/P - EDGE OF PAVEMENT  
NORMAL DEPTH = 0.05'  
LOCVAL 100YR PONDING ELEV. = 62.50+0.05' = 62.55'

← CONFINED EXTREME EVENT OVERFLOW

REVISION	DATE
DESCRIPTION	M/D/YY

**WATERENGINEERS, INC.**  
Water & Wastewater Treatment Consultants  
TEXAS BOARD OF PROFESSIONAL ENGINEERS FIRM No. 2066  
17230 HUBBARD ROAD  
CYPRESS, TEXAS 77429  
TEL: 281-379-0500  
FAX: 281-379-1115

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CIVIL PLANS FOR THE CONSTRUCTION OF  
**SUNBURST TRADING**  
15151 WEST DRIVE  
HOUSTON, TEXAS 77053

SHEET NAME:  
**DRAINAGE AREA PLAN**

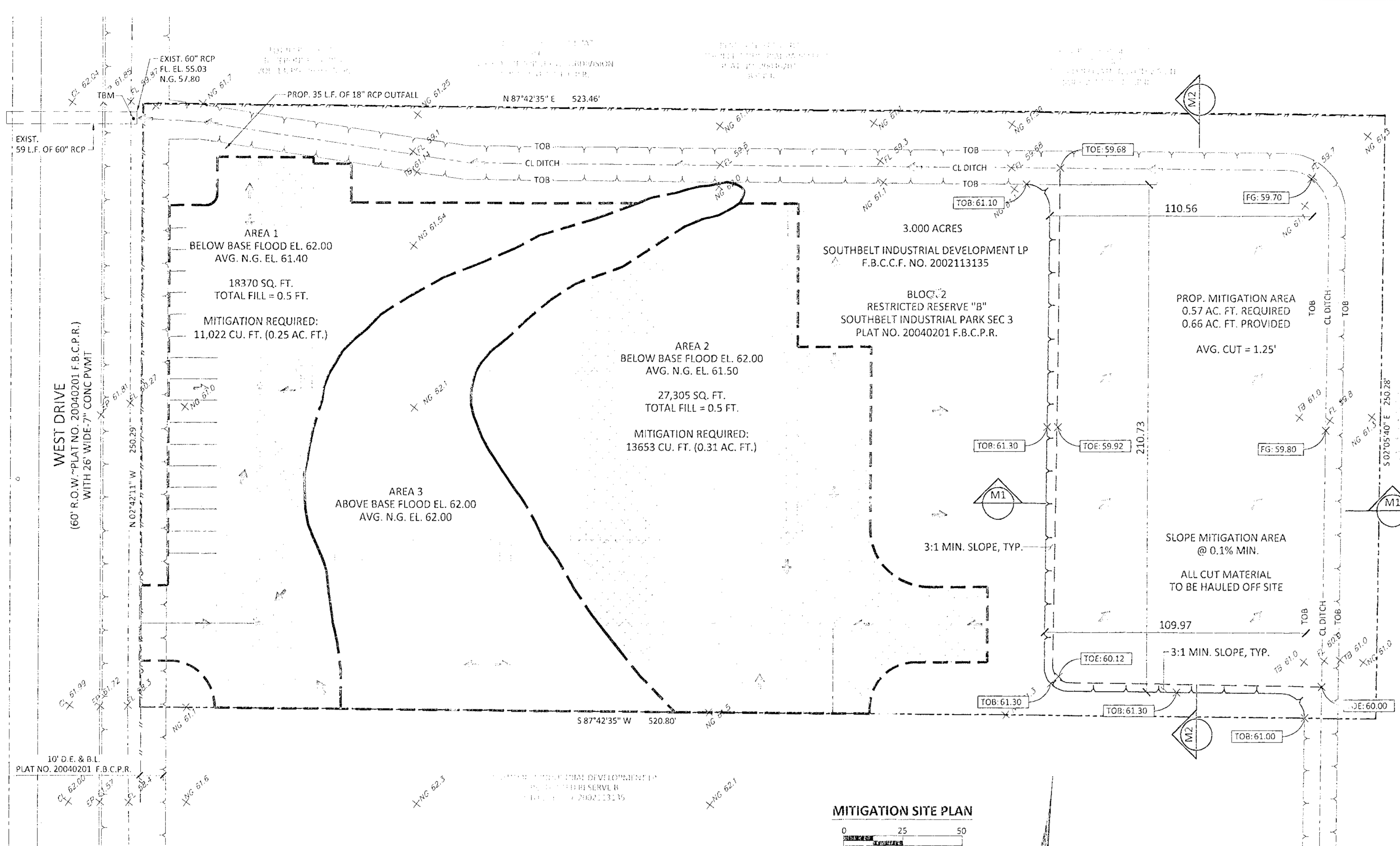
DRAWN BY: JLW  
CHECKED BY: DRY

PROJECT No.: 5759.1  
DATE: 9/25/2017

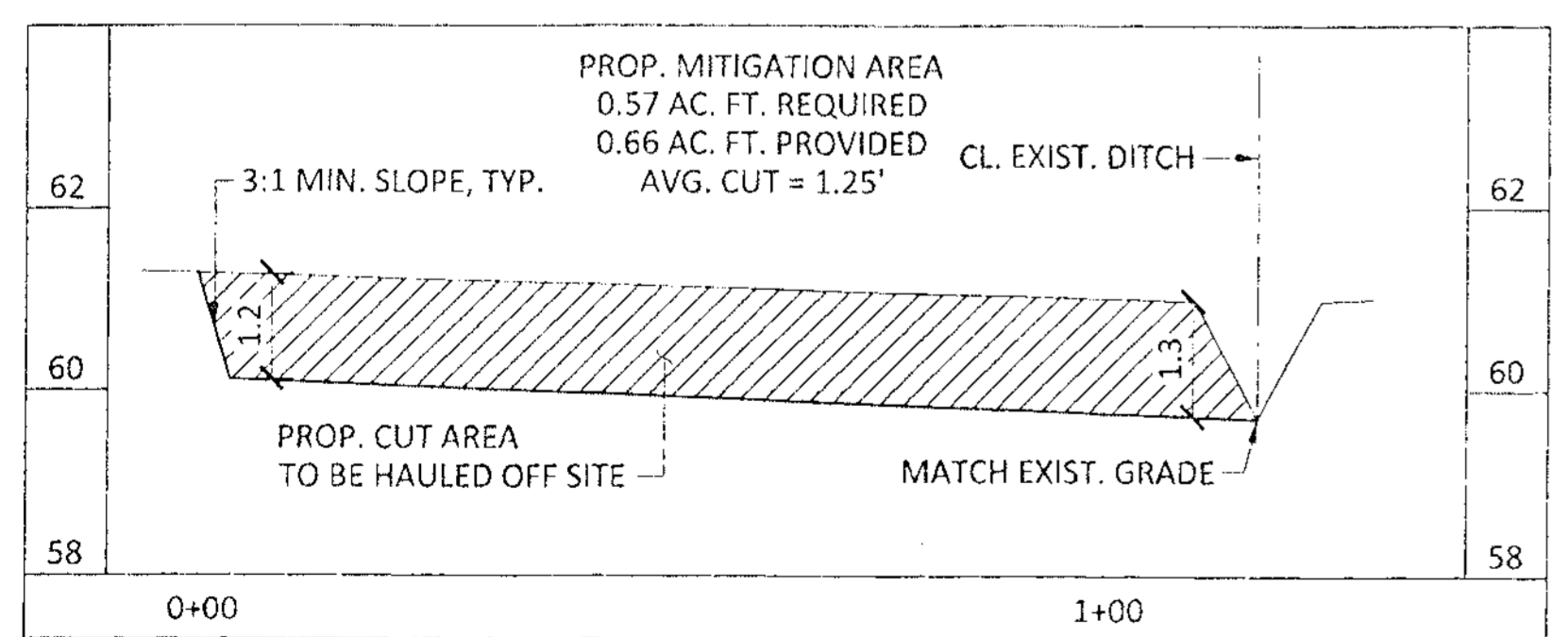
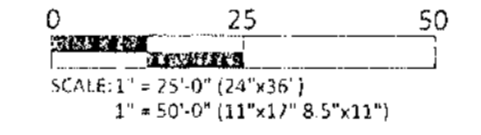
SHEET No.: **04 OF 12**

\\server\wei\cad\current\jobs\5759.01\sunburst trading\wei current\04-05 drainage plan.dwg

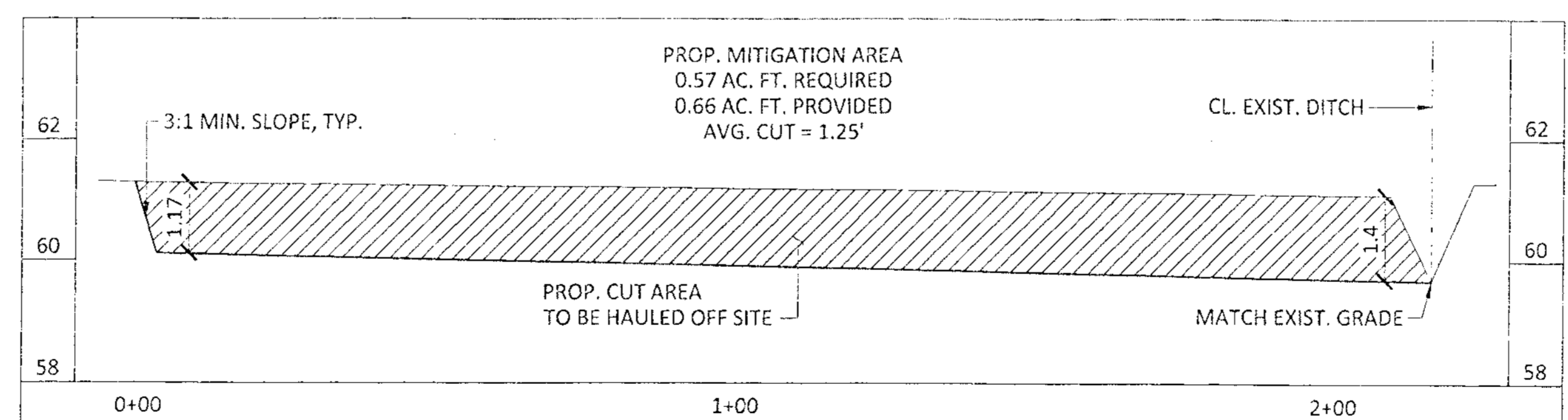




**MITIGATION SITE PLAN**



**M1 LATITUDINAL MITIGATION PROFILE**  
SCALE: HORIZONTAL: 1" = 20'-0" / VERTICAL: 1" = 2'-0"



**M2 LONGITUDINAL MITIGATION PROFILE**  
SCALE: HORIZONTAL: 1" = 20'-0" / VERTICAL: 1" = 2'-0"

MITIGATION DESIGN CALCULATIONS	
WIDTH (LATITUDINAL)	110 FT.
LENGTH (LONGITUDINAL)	210 FT.
TOTAL PROPOSED CUT	1.25 FT.
LAT. CROSS SECTIONAL AREA	137.5 SQ. FT.
LAT. VOLUME	28875 CU. FT.
	0.66 AC.-FT.
LONG. CROSS SECTIONAL AREA	264 SQ. FT.
LONG. VOLUME	29040 CU. FT.
	0.67 AC.-FT.
TOTAL MITIGATION PROVIDED	28957.50 CU. FT.
	0.66 AC.-FT.

Note: based on average volumes across the Site

MITIGATION REQUIREMENT CALCULATION	
BASE FLOOD ELEVATION	62.00 FT.
AREAS BELOW BASE FLOOD ELEVATION	
AREA 1	18370 SQ. FT.
AVERAGE NATURAL GRADE ELEV.	61.4 FT.
PROP. AVERAGE FILL	0.6 FT.
AREA 1 MITIGATION REQUIRED	11022 CU. FT.
	0.25 AC.-FT.
AREA 2	27305 SQ. FT.
AVERAGE NATURAL GRADE ELEV.	61.5 FT.
PROP. AVERAGE FILL	0.5 FT.
AREA 2 MITIGATION REQUIRED	13652.5 CU. FT.
	0.31 AC.-FT.
TOTAL MITIGATION REQUIRED	24674.5 CU. FT.
	0.57 AC.-FT.

**SITE DRAINAGE ANALYSES :**  
SEE ATTACHED REPORT PREPARED BY:  
LAWRENCE S. LOPEZ, P.E. (TEXAS LICENSE No. 88565)  
4SITE CIVIL ENGINEERING, LP (FIRM No. F-5076)

**SITE DESCRIPTION:**  
3.000 ACRES OF LAND LOCATED IN THE HENRY LEVERING SURVEY, ABSTRACT 279, FORT BEND COUNTY, TEXAS AND BEING A PORTION OF RESTRICTED RESERVE "B", BLOCK 2 OF SOUTHBELT INDUSTRIAL PARK SEC 3, RECORDED IN PLAT NO. 20040201 OF F.B.C.P.R.

**FLOOD PLAIN:**  
ACCORDING TO FEMA FLOOD INSURANCE RATE MAP (FIRM) NO. 48157C0305L, MAP REVISED 04/02/2014, THE SURVEYED TRACT LIES IN ZONE AE, THE 100 YEAR FLOOD PLAIN ELEVATION APPEARS TO BE @ 62.0

**TBM:**  
IS THE TOP THE 60" RCP CULVERT LOCATED AT THE NORTH WEST CORNER OF THE SITE. ELEVATION = 60.26 (2001 ADJUSTED DATUM)

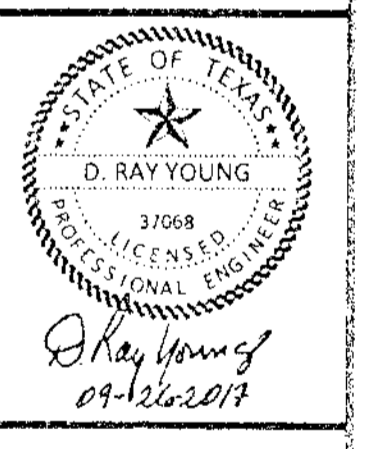
**BENCHMARK:**  
RIM 010215, FROM SH 288 AT FM 2234: TRAVEL ± 3.25 MILE WEST ON FM 2234 TO CLEAR CREEK AND STATION ON RIGHT (NORTH). MONUMENT IS AT THE CENTER OF HEADWALL ON THE NORTH SIDE OF FM 2234. ELEVATION 62.95, 2001 ADJUSTED DATUM.

APPROVED: *[Signature]*  
Development Coordinator  
DATE: 8/31/2017

REVISION	DATE

**WATER ENGINEERS, INC.**  
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**CIVIL PLANS FOR THE CONSTRUCTION OF**  
**SUNBURST TRADING**  
15151 WEST DRIVE  
HOUSTON, TEXAS 77053



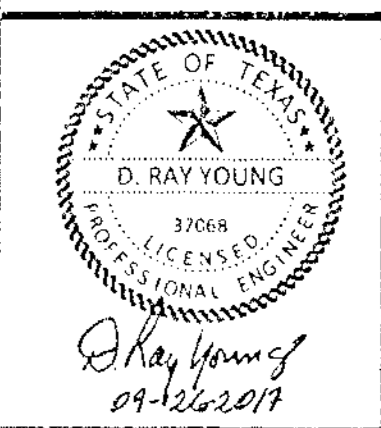
SHEET NAME:  
**MITIGATION PLAN**

DRAWN BY: JLW  
CHECKED BY: DRY  
PROJECT No.: 5759.1  
DATE: 8/31/2017  
SHEET No.:

REVISION	DATE
DESCRIPTION	M/D/YY

**WATERENGINEERS, INC.**  
 Water & Wastewater Treatment Consultants  
 TEXAS BOARD OF PROFESSIONAL ENGINEERS FIRM NO. 20669  
 17330 HUMBERT ROAD  
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CIVIL PLANS FOR THE CONSTRUCTION OF  
**SUNBURST TRADING**  
 15151 WEST DRIVE  
 HOUSTON, TEXAS 77053



SHEET NAME:

**CIVIL DETAILS 1**

DRAWN BY: JLW

CHECKED BY: DRY

PROJECT No.: 5759.1

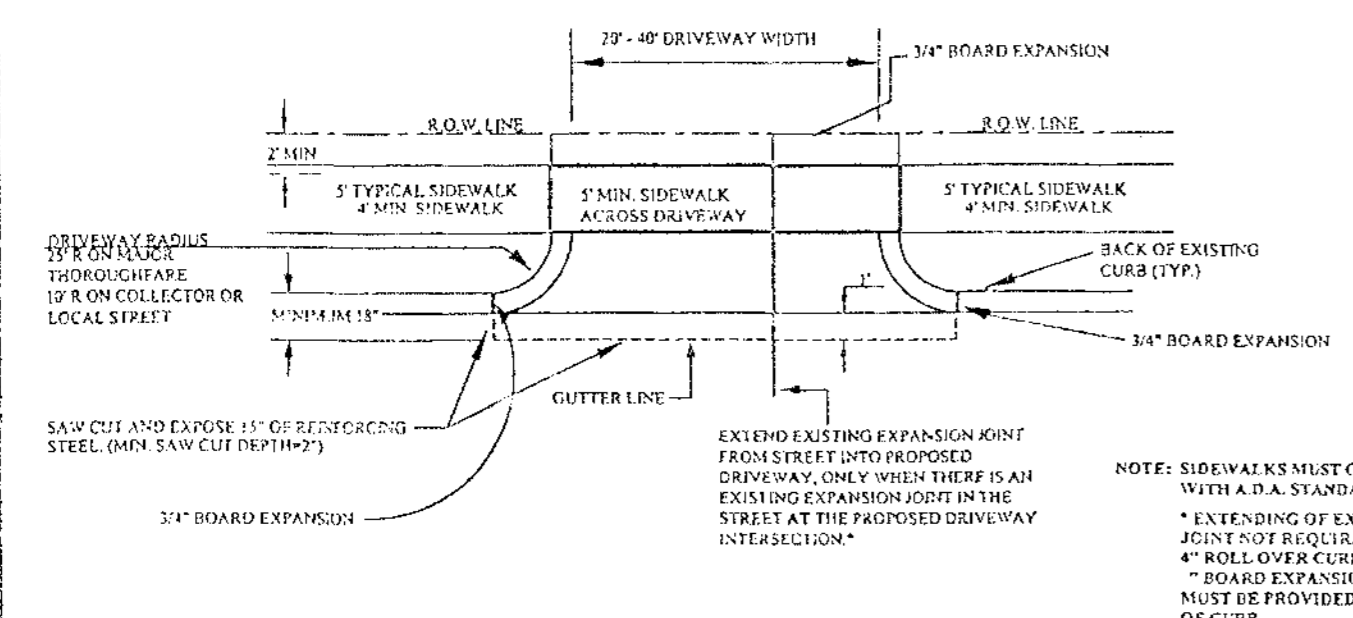
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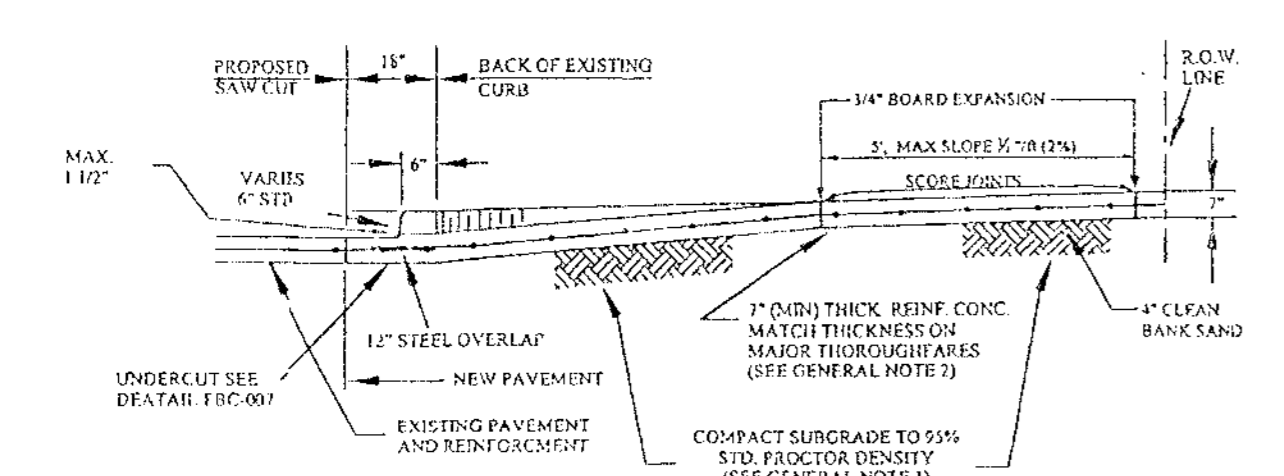
**07 OF 12**

WHEN A COMMERCIAL SIDEWALK, DRIVEWAY, CURB OR GUTTER IS CONSTRUCTED, RECONSTRUCTED, REPAIRED OR GRADED ON COUNTY RIGHT-OF-WAY. FOR USE WITH CONCRETE OR ASPHALT CURB TYPE STREETS, USE SECTIONS APPLICABLE.

A. USE FOR ALL PROPOSED EXISTING CURB REMOVAL FOR DRIVEWAYS (PLAN VIEW NOT TO SCALE)



B. USE FOR ALL PROPOSED DRIVES ON CURBED TYPE STREETS



- GENERAL NOTES:**
1. COMPACT SUBGRADE FOR PROPOSED DRIVEWAY CONNECTION FROM PROPOSED SAW CUT AT EXISTING PAVEMENT TO R.O.W. LINE. COMPACT TO 95% OF STANDARD PROCTOR DENSITY (4% OPT. MOISTURE). THE COUNTY ENGINEER RESERVES THE RIGHT TO REQUIRE LABORATORY TESTS TO BE CONDUCTED.
  2. PROPOSED DRIVEWAY REINFORCING STEEL IS TO BE #4 DEFORMED REINFORCING BARS (ASTM A615 GRADE 80, UNLESS NOTED) SPACED AT 24 INCHES C.C., EACH WAY, WITH 12 INCHES MINIMUM LAP (6" x 6" W6 x W6 AS ALTERNATE) FROM PROPOSED SAW CUT TO RIGHT-OF-WAY LINE.
  3. PROPOSED DRIVEWAY SHALL BE CONSTRUCTED WITH PORTLAND CEMENT CONCRETE, CLASS "A" STRUCTURAL (REFER TO SPECIFICATION 03301), 7 INCHES THICK FROM PROPOSED SAW CUT TO RIGHT-OF-WAY LINE (PROPERTY LINE).
  4. PROPOSED SIDEWALK SHALL BE CONSTRUCTED WITH PORTLAND CEMENT CONCRETE, CLASS "A" STRUCTURAL (REFER TO SPECIFICATION 03301), 4 INCHES THICK.
  5. FOR TYPICAL SIDEWALK OF ATAIL SEE FCB-025A.

SIDEWALKS & DRIVEWAYS ON CURB TYPE STREETS COMMERCIAL AREA	DRAWN BY: L. BRDECKA DATE DRAWN: 2-1-94	REVISED BY: J. NETARDUS DATE REVISED: 4-7-09
	APPROVED BY: L. HOOD DATE: 2-1-94	DRAWING NO. FBC-025A

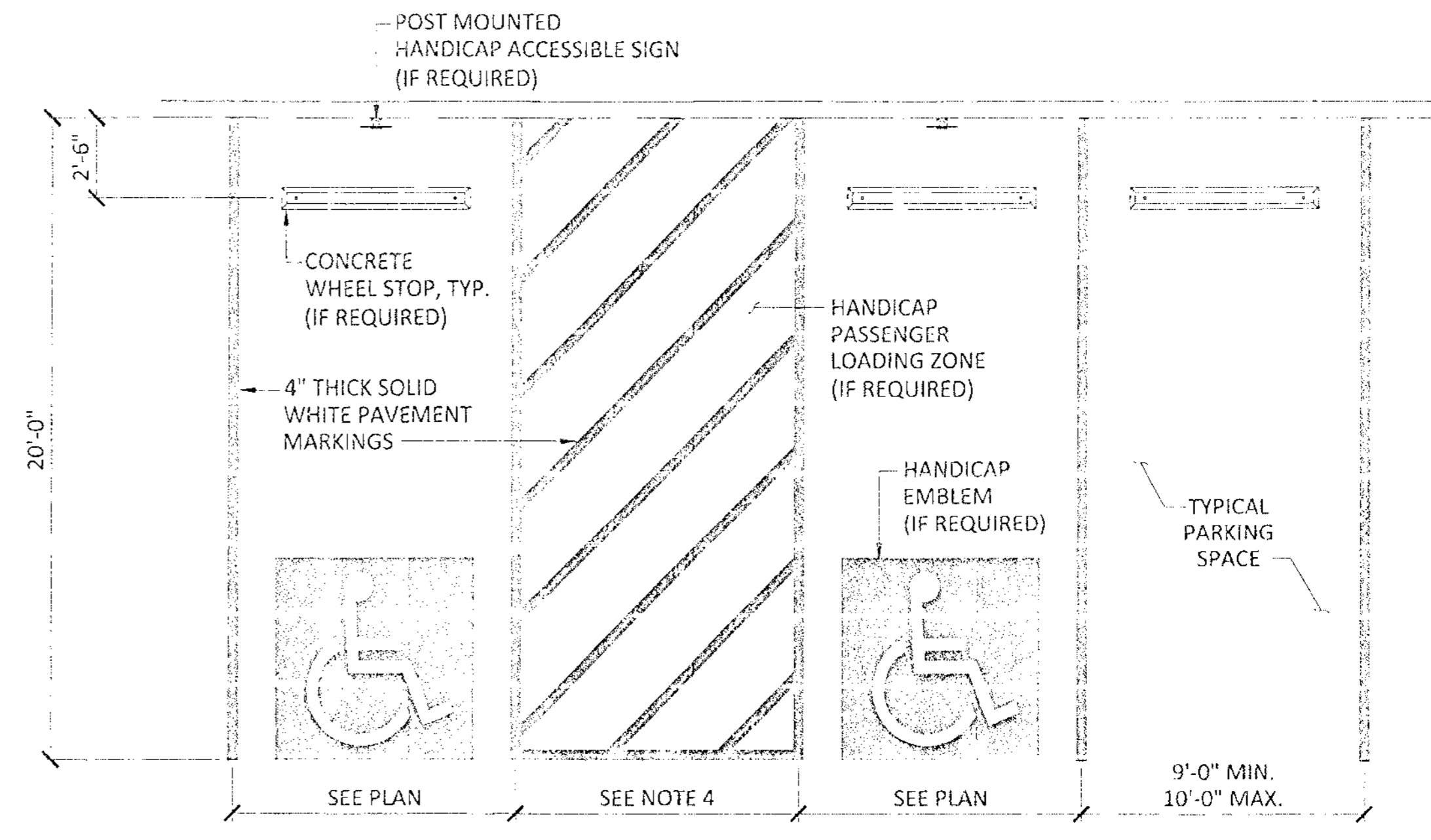
FORT BEND COUNTY ENGINEERING DEPARTMENT

**GENERAL NOTES FOR SIDEWALKS AND DRIVEWAYS**

1. SAW CUT EXISTING CURB AT EACH END AND KNOCK OUT CURB FROM BEGINNING TO END OF PROPOSED DRIVEWAY.
2. SAW CUT EXISTING PAVEMENT A MINIMUM OF 18" INCHES AWAY FROM BACK OF CURB (GUTTER LINE) AND BREAK OUT TO EXPOSE EXISTING REINFORCEMENT STEEL.
3. COMPACT SUBGRADE FOR PROPOSED DRIVEWAY CONNECTION FROM PROPOSED SAW CUT AT EXISTING PAVEMENT TO RIGHT-OF-WAY LINE. COMPACT TO 95% OF STANDARD PROCTOR DENSITY (4% - 2% OPT. MOISTURE). THE COUNTY ENGINEER RESERVES THE RIGHT TO REQUIRE LABORATORY TESTS TO BE CONDUCTED.
4. PLACE AND COMPACT 4" CLEAN BANK SAND.
5. MAINTAIN GUTTER LINE WITH FACE OF EXISTING CURB.
6. PROPOSED DRIVEWAY REINFORCING STEEL IS TO BE TIED TO EXISTING ROADWAY REINFORCING STEEL WITH A MINIMUM LAP OF 12 INCHES.
7. PROPOSED DRIVEWAY REINFORCING STEEL IS TO BE #4 DEFORMED REINFORCING BARS (ASTM A615 GRADE 80, UNLESS NOTED) SPACED AT 24 INCHES C.C., EACH WAY, WITH 12 INCHES MINIMUM LAP (6" x 6" W6 x W6 AS ALTERNATE) FROM PROPOSED SAW CUT TO RIGHT-OF-WAY LINE.
8. PROPOSED DRIVEWAY, CURB, GUTTER LINE, AND GRADE SHALL MATCH EXISTING STREET.
9. PROPOSED DRIVEWAY SHALL BE CONSTRUCTED WITH PORTLAND CEMENT CONCRETE, CLASS "A" STRUCTURAL (REFER TO SPECIFICATION 03301), 7 INCHES THICK FROM PROPOSED SAW CUT TO RIGHT-OF-WAY LINE (PROPERTY LINE).
10. PROPOSED SIDEWALK SHALL BE CONSTRUCTED WITH PORTLAND CEMENT CONCRETE, CLASS "A" STRUCTURAL (REFER TO SPECIFICATION 03301), 4 INCHES THICK AND 4 FEET MINIMUM WIDTH. SEE DRAWING NO. FBC 24A FOR ADDITIONAL INFORMATION AND DETAILS.

CONSTRUCTION NOTES FOR SIDEWALKS & DRIVEWAYS WITH CURB TYPE STREETS COMMERCIAL AREA	DRAWN BY: L. BRDECKA DATE DRAWN: 2-1-94	REVISED BY: L. BRDECKA DATE REVISED: 3-10-05
	APPROVED BY: L. HOOD DATE: 2-1-94	DRAWING NO. FBC-025B

FORT BEND COUNTY ENGINEERING DEPARTMENT



**ACCESSIBLE PARKING NOTES:**

1. ALL SLOPES FOR ACCESSIBLE SPACES, AND ACCESSIBLE AISLES SHALL NOT EXCEED 2%.
2. COLUMNS SHALL NOT ENCRUCH INTO SPACES, AISLE OR PASSENGER LOADING ZONE.
3. PAVEMENT MARKINGS SHALL BE 5 FEET WIDE FOR CARS, AND 9 FEET FOR VANS.

**PARKING DETAIL NTS**

**FIRE LANE SIGN NOTES:**

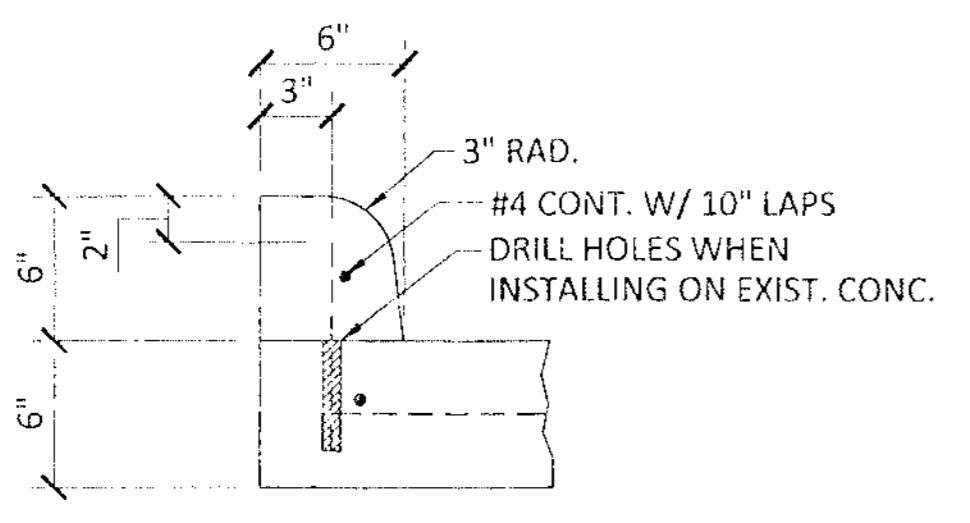
1. AT THE BEGINNING AND END OF THE FIRE LANE,
2. THE SIGN SHALL HAVE A SINGLE HEADED ARROW POINTING IN THE DIRECTION THE REGULATION IS IN EFFECT. THE INTERMEDIATE SIGN SHALL HAVE DOUBLE HEADED ARROWS POINTING IN BOTH DIRECTIONS.
3. DESIGNATED CURBS SHALL BE PAINTED "RED" CURBS SHALL BE CONSPICUOUSLY AND LEGIBLY MARKED WITH THE WARNING "FIRE LANE NO PARKING/TOW-AWAY ZONE" IN WHITE LETTER AT LEAST 3" IN HEIGHT, AT INTERVALS NOT EXCEEDING 50'.
4. THE SIGNS SHALL BE SET AT AN ANGLE OF NOT LESS THAN 30° NOR MORE THAN 45° WITH THE CURB OR LINE OF TRAFFIC FLOW.
5. THE CLEARANCE TO THE BOTTOM OF THE SIGN SHALL BE 7 FEET. THERE SHALL BE NO OTHER SIGNS ATTACHED TO THE SIGN OR SIGN POLE.



**FIRE LANE SIGN DETAIL NTS**

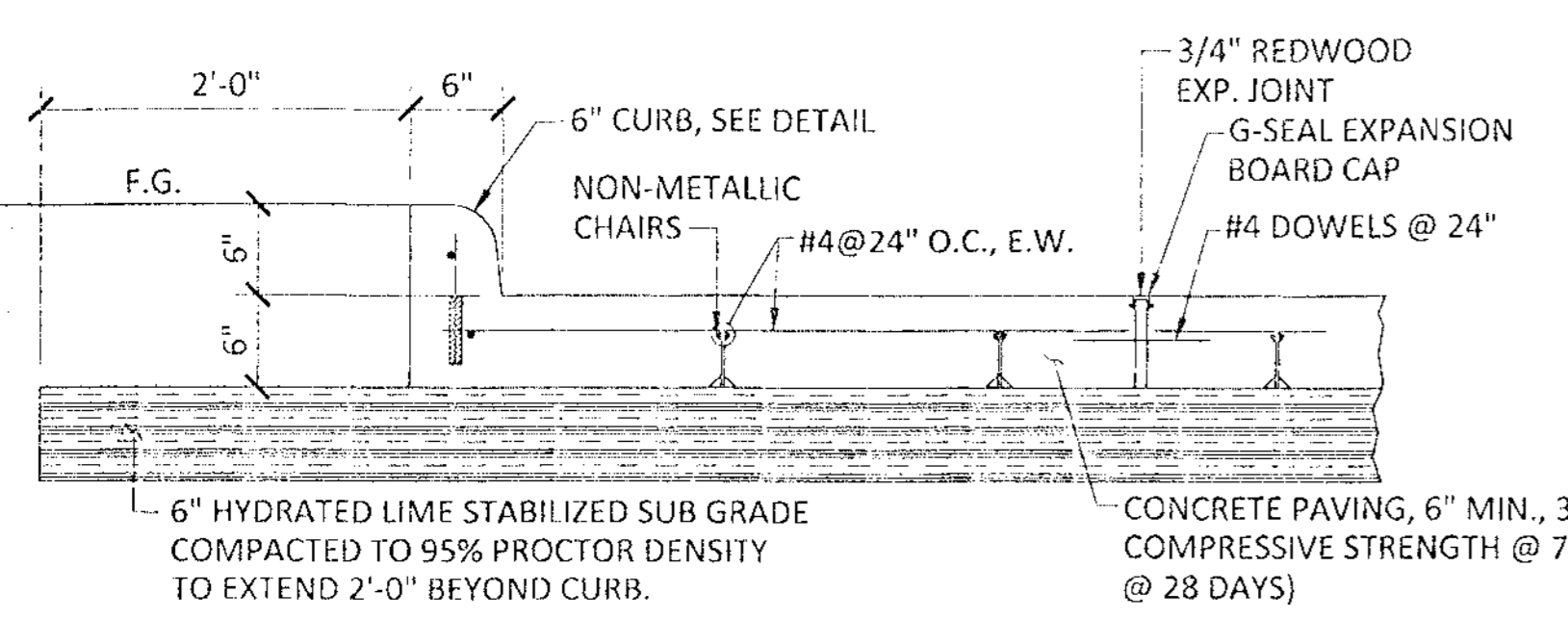
**FIRE LANE NOTES**

1. STANDARD 6" CURB: PAINT RED LANE STRIPE ON BOTH FACE AND TOP OF CURB PAINT WHITE LETTERS ON FACE AND TOP OF CURB ONLY.
2. LOW CURB (HEADER CURB OR NO CURB): PAINT RED LANE STRIPE AND WHITE LETTERS ON TOP OF HEADER CURB OR PAVEMENT.
3. DESIGNATED CURBS SHALL BE PAINTED "RED" CURBS SHALL BE CONSPICUOUSLY AND LEGIBLY MARKED WITH THE WARNING "FIRE LANE NO PARKING/TOW-AWAY ZONE" IN WHITE LETTER AT LEAST 3" IN HEIGHT, AT INTERVALS NOT EXCEEDING 50'.
4. DESIGNATED STRIPE ON PAVEMENT SHALL BE PAINTED "RED". STRIPES SHALL BE CONSPICUOUSLY AND LEGIBLY MARKED WITH THE WARNING "FIRE LANE NO PARKING/ TOW-AWAY ZONE" IN WHITE LETTERS AT LEAST 3" IN HEIGHT, AT INTERVALS NOT EXCEEDING 50'.
5. CURBS LOCATED ON EITHER SIDE OF A FIRE LANE SHALL BE PAINTED RED OR A RED STRIPE SHALL BE PLACED ALONG THE PAVEMENT WHERE THERE IS NO CURB. WHERE A FIRE LANE PASSES BETWEEN HEAD IN PARKING SPACES, THE RED STRIPE SHOULD BE PLACED ALONG THE REAR OF THESE SPACES CLEARLY DEFINING THE FIRE LANE.
6. PAINTED CURBS AND FIRE LANE STRIPES SHALL ALSO BE CONSPICUOUSLY AND LEGIBLY MARKED WITH THE WARNING "FIRE LANE-TOW AWAY ZONE" IN WHITE LETTERS AT LEAST THREE (3) INCHES IN HEIGHT, AT INTERVALS NOT EXCEEDING (50) FEET.
7. WHERE ARE LANES ARE CLEARLY DEFINED BY CURB/PAVEMENT STRIPING, FIRE LANE SIGNS ARE NOT REQUIRED. FIRE LANE SIGNS SHOULD BE PLACED EVERY (75) FEET ALONG ANY FIRE LANE WHERE PAVEMENT OR CURB STRIPING IS NOT PRACTICAL.
8. ANY COLOR OTHER THAN RED MAY BE USED IN "NO PARKING" AREAS THAT ARE NOT APPROVED FIRE LANES.
9. RED COLORED CURBS, PAVEMENT STRIPING OR WHEEL STOPS SHALL BE USED ONLY TO DESIGNATE APPROVED FIRE LANES. THE PLANS WILL BE APPROVED WITH THE CIVIL SITE-PLAN REVIEW BUT MAY BE REVISED AT FIRE CODE REVIEW, BY THE BUILDING OFFICIAL.



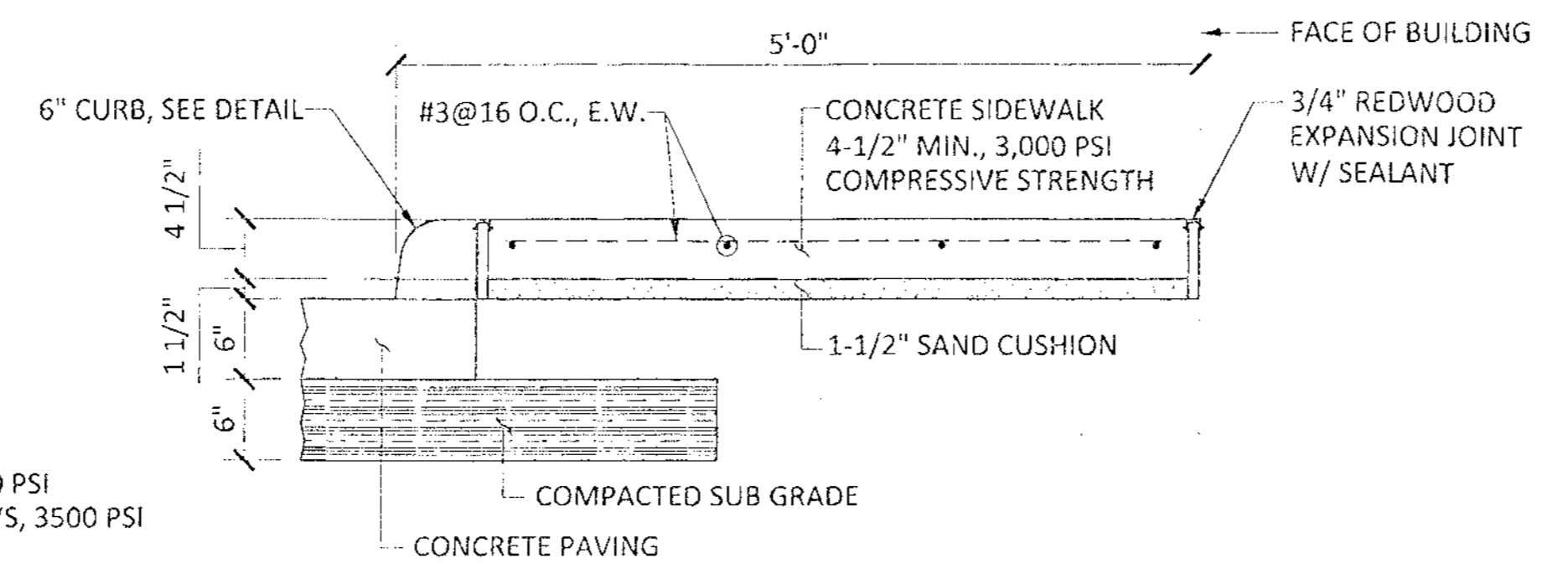
**6" CURB DETAIL NTS**

**NOTE:**  
 SET #4 DOWELS, 9" LONG @ 18" O.C. WHEN PAVEMENT SECTION IS POURED. WHEN CONCRETE CURB IS PLACED ON AN EXISTING CONC. BASE, SET #4 BARS, 9" LONG @ 8" O.C. AS SHOWN, SET IN SULPHUR OR QUICK SETTING CEMENT.



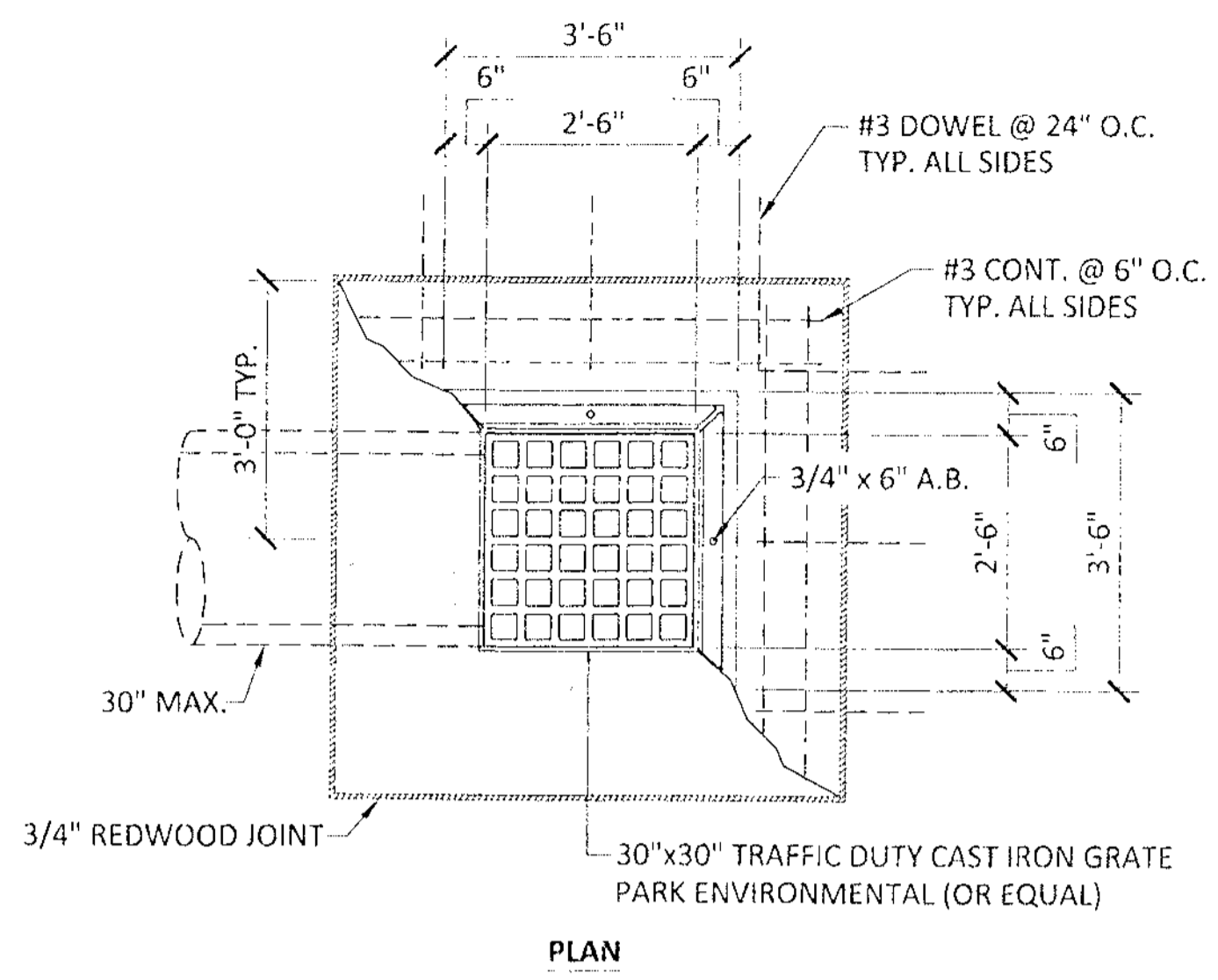
**CONCRETE PAVING DETAIL NTS**

SEE CONSTRUCTION DWGS FOR SIDEWALK WIDTHS REQ'D. SIDEWALKS OVER 8' WIDE TO HAVE LONGITUDINAL EXPANSION JOINT IN CENTER

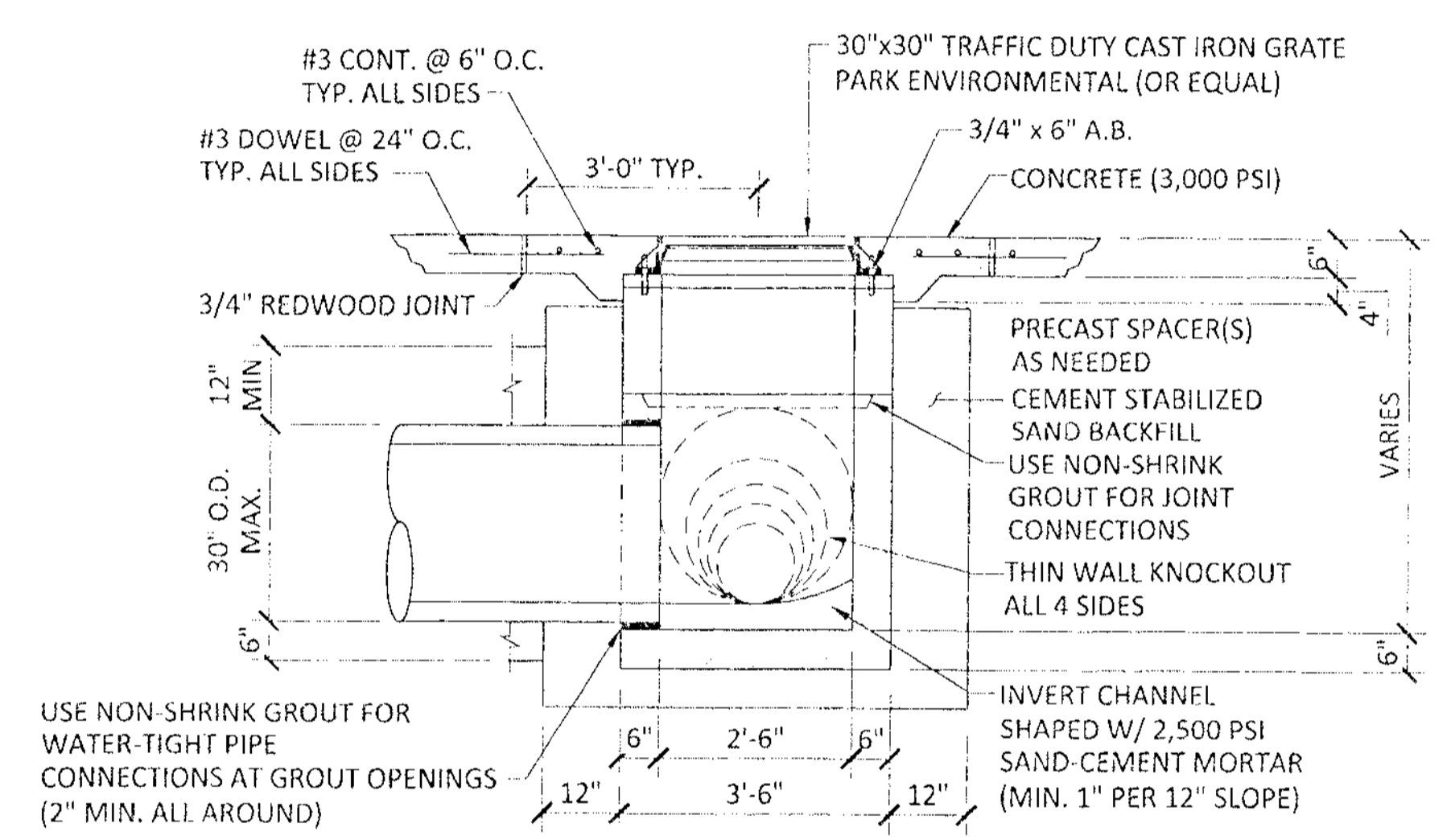


**SIDEWALK DETAIL NTS**

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PLAN



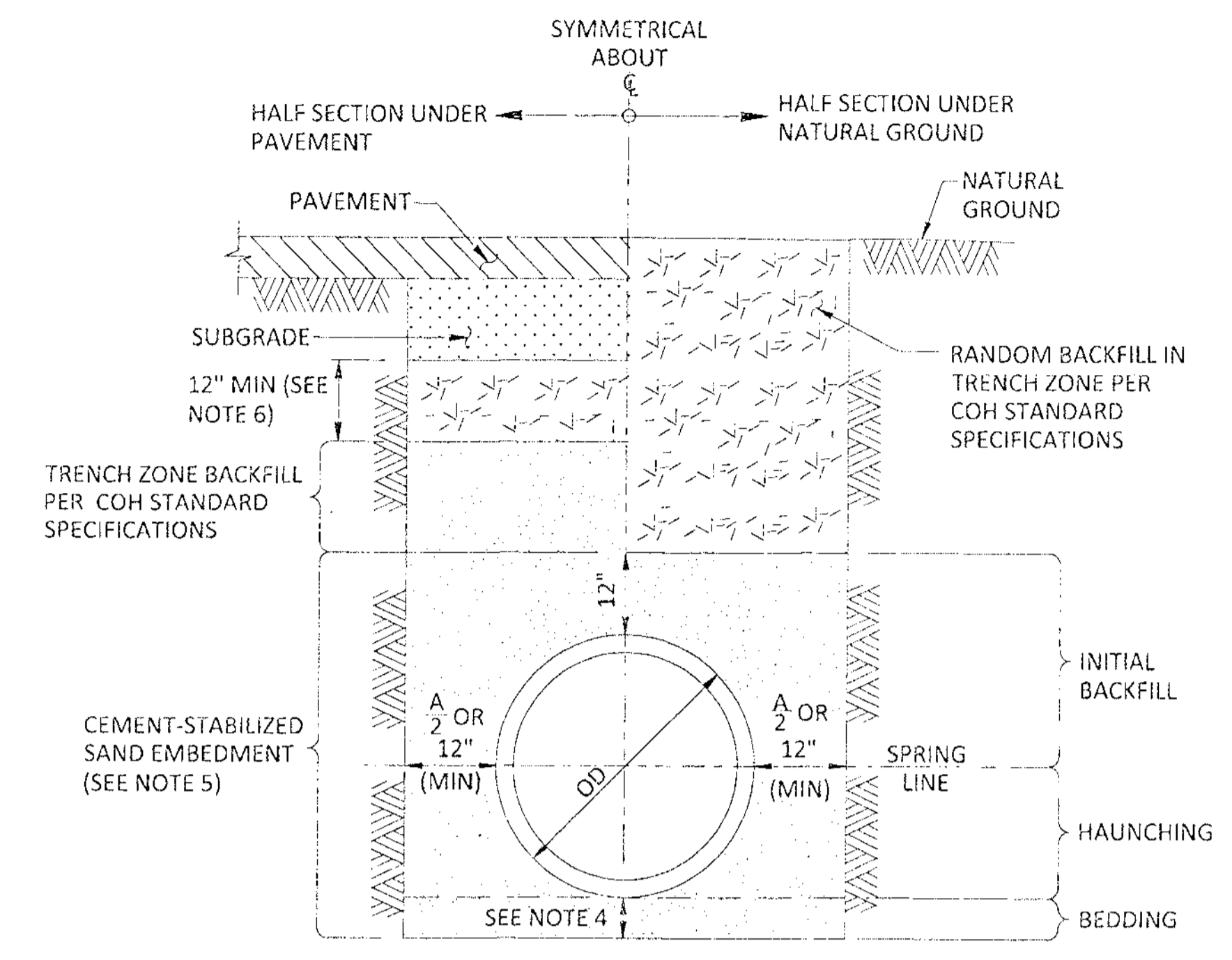
SECTION

**STORM SEWER TYPE "A" GRATED INLET DETAIL**

NTS

GENERAL NOTES:

1. PRECAST STRUCTURE TO MEET ASTM C913
2. KNOCK-OUTS ARE NOT PERMISSIBLE FOR PRECAST CONSTRUCTION OF INLET.
3. CEMENT STABILIZED SAND SHALL EXTEND TO THE BOTTOM OF PAVEMENT OR SLOPE PAVING, OR 12 INCHES BELOW THE SURFACE IF INLET IS LOCATED IN AN UNPAVED AREA.



TYPICAL CROSS-SECTION

**SANITARY & STORM SEWER BEDDING AND BACKFILL FOR DRY STABLE TRENCH**

NTS

NOTES:

1. THIS DETAIL MAY BE USED ONLY FOR DRY STABLE TRENCH CONDITIONS PER COH STANDARD. SEE COH STANDARD SPECIFICATION FOR REQUIREMENTS IN OTHER CONDITIONS.
2. MIN TRENCH WIDTH SHALL BE PIPE OD PLUS AN ALLOWANCE "A" FOR THE NOMINAL PIPE SIZE:  

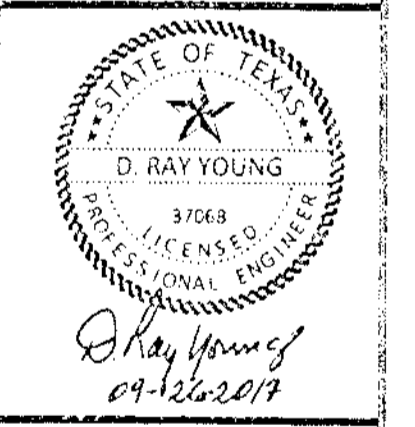
NOMINAL PIPE SIZE	"A"
18" TO 30"	24"
OVER 30"	36"
3. MAX TRENCH WIDTH SHALL BE NOT GREATER THAN MIN TRENCH WIDTH PLUS 24 INCHES, UNLESS OTHERWISE NOTED.
4. MIN BEDDING DEPTH SHALL BE THE GREATER OF PIPE OD OR 6 INCHES.
5. ALTERNATIVE EMBEDMENT BACKFILL MATERIALS FOR FORCE MAINS MAY BE ALLOWED. SEE COH STANDARD SPECIFICATIONS.
6. SELECT BACKFILL FOR RIGID PAVEMENT; FLEXIBLE BASE MATERIAL FOR ASPHALT PAVEMENT.

REVISION	DATE
DESCRIPTION	M/D/Y

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**CIVIL PLANS FOR THE CONSTRUCTION OF  
 SUNBURST TRADING  
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 HOUSTON, TEXAS 77053**



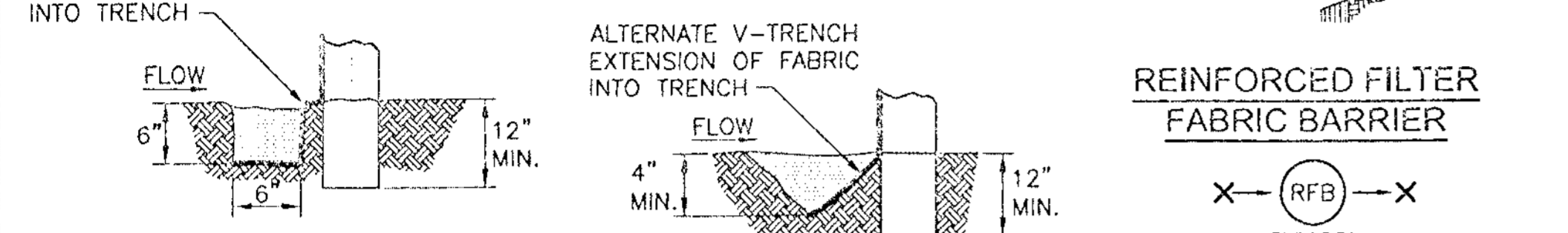
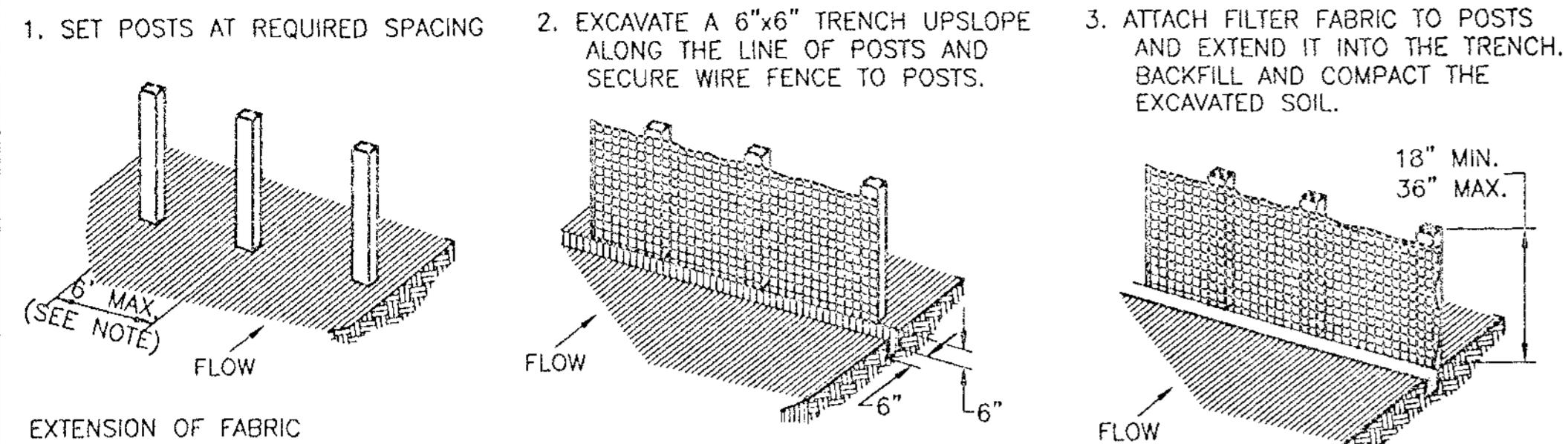
SHEET NAME:  
**CIVIL DETAILS 2**

DRAWN BY: JLW  
 CHECKED BY: DRY  
 PROJECT No.: 5759.1  
 DATE: 9/26/2017  
 SHEET No.:

APPROVED: *[Signature]*  
 Development Coordinator  
 DATE: 10/10/17

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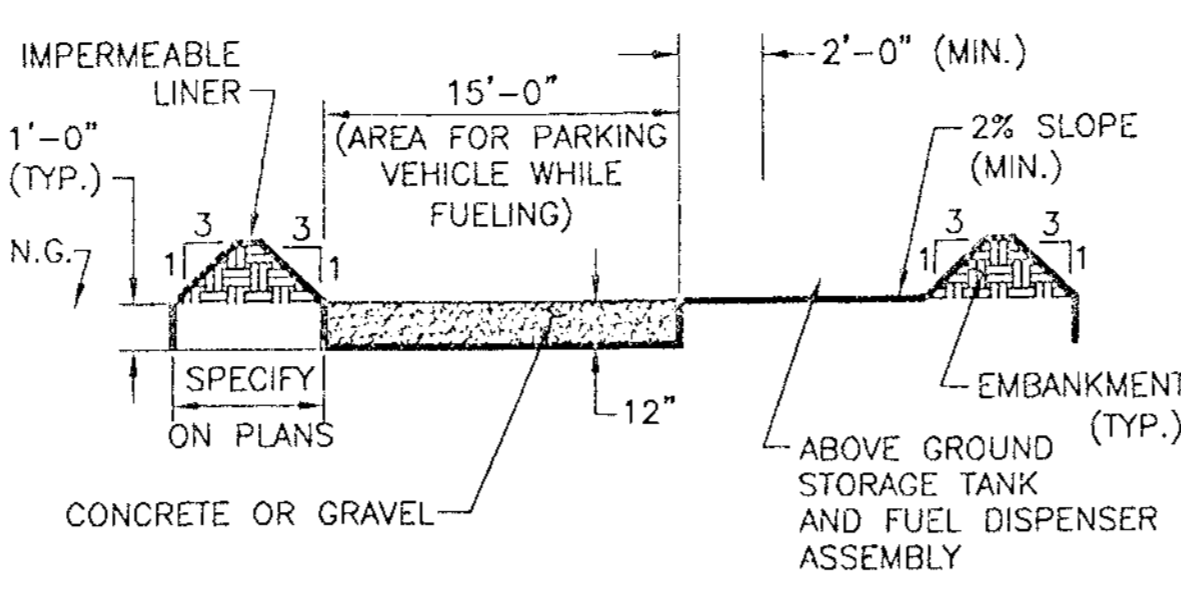




**REINFORCED FILTER FABRIC BARRIER**  
SYMBOL: (RFB)

**GENERAL NOTES:**

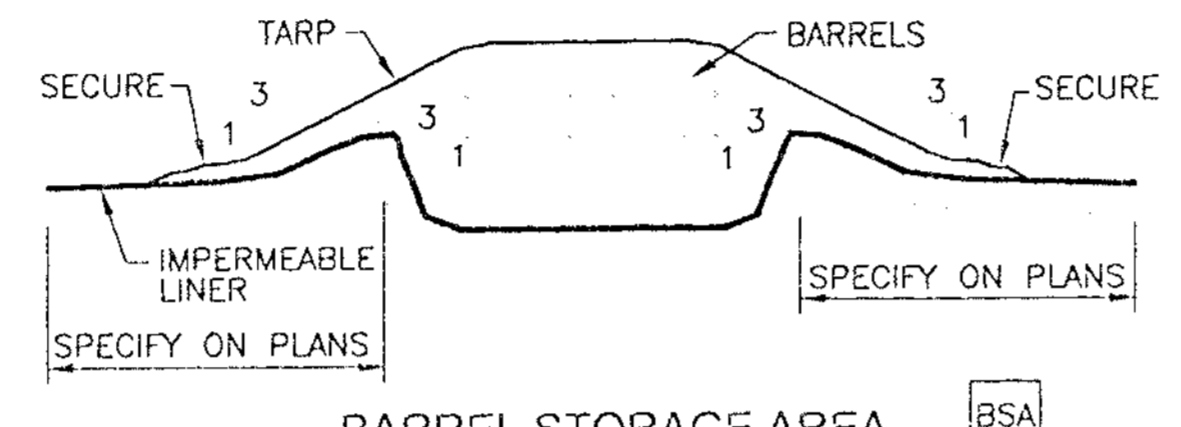
1. SECURELY FASTEN MESH FENCING TO POSTS WITH STAPLES OR TIE WIRES.
2. SECURELY FASTEN FILTER FABRIC TO MESH FENCING.
3. WHEN TWO SECTIONS OF FILTER FABRIC ADJOIN EACH OTHER, OVERLAP 6 INCHES AT A POST, FOLD TOGETHER, AND ATTACH TO A POST.
4. REMOVE SEDIMENT DEPOSITS WHEN SILT REACHES ONE-THIRD OF THE HEIGHT OF THE FENCE IN DEPTH.



**ABOVE GROUND TEMP. VEHICLE & EQUIPMENT FUELING AREA WITH TANK**  
SYMBOL: (TFA)

**GENERAL NOTES:**

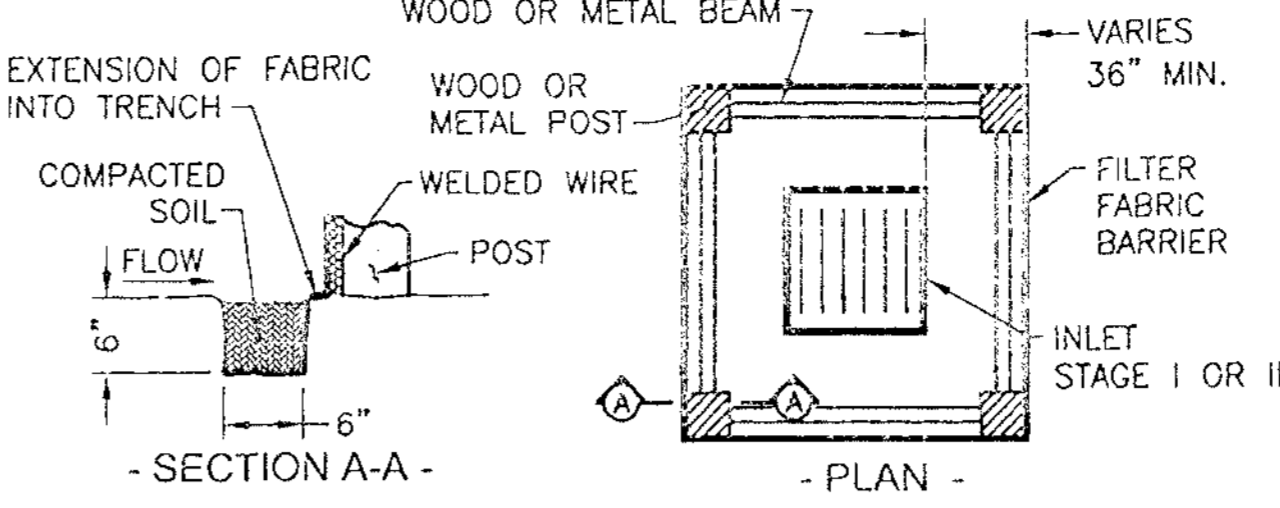
1. THE SIZE OF TANK FOUNDATION AREA DEPENDS ON THE SIZE OF ABOVE GROUND STORAGE TANK AND DISPENSER ASSEMBLY.
2. PROVIDE A MINIMUM SLOPE OF 2% TOWARD THE SUMP PIT.
3. INSTALL IMPERMEABLE LINER AS PER MANUFACTURER'S RECOMMENDATIONS.



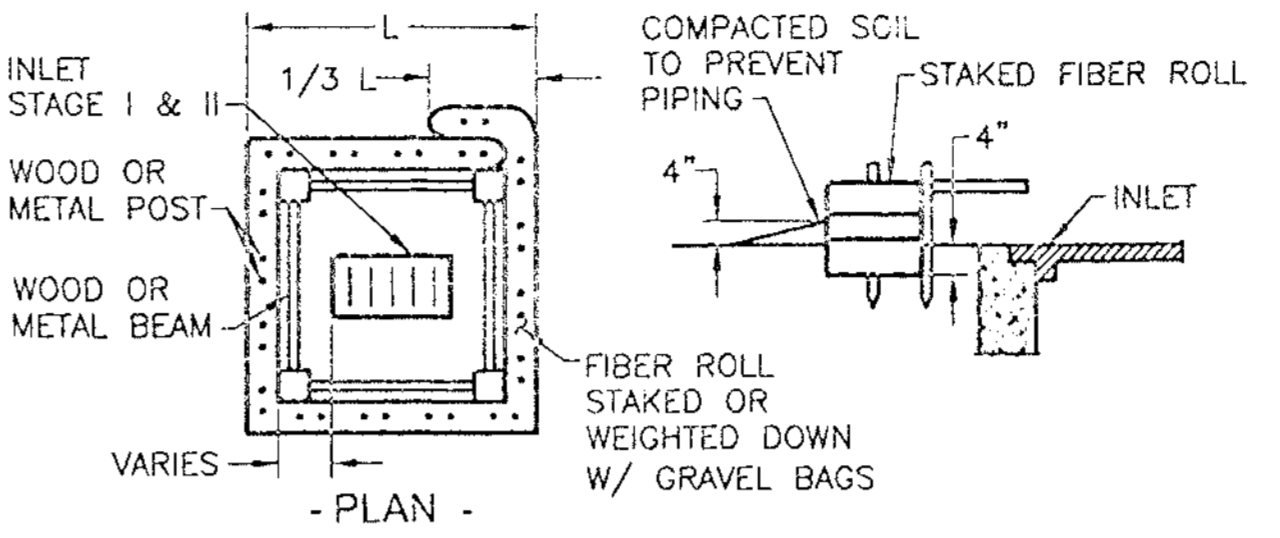
**BARREL STORAGE AREA**  
SYMBOL: (BSA)

**GENERAL NOTES:**

1. ALTERNATIVELY, STORE BARRELS IN AN ENCLOSED BUILDING OR SHED.
2. INSTALL IMPERMEABLE LINER AS PER MANUFACTURER'S RECOMMENDATIONS. 60 mil MINIMUM.
3. CONSTRUCT BERMED AREA WITH VOLUME GREATER THAN OR EQUAL TO 110% VOLUME OF BARRELS.



**INLET PROTECTION BARRIER WITH REINFORCED FILTER FABRIC**  
SYMBOL: (IPB-I)

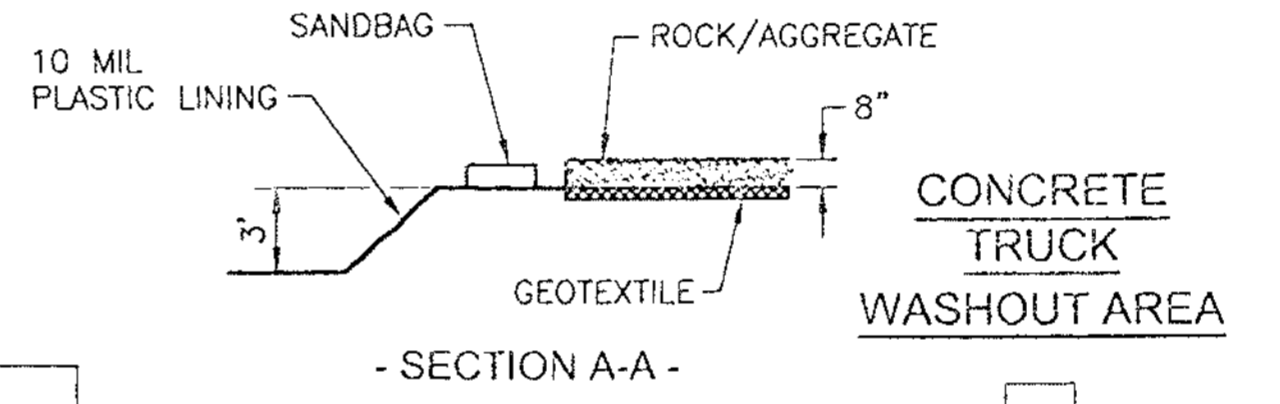


**INLET PROTECTION BARRIER WITH FIBER ROLLS**  
SYMBOL: (IPB-II)

**GENERAL NOTES:**

1. FIBER ROLLS WILL BE UTILIZED ONLY WHEN SITE CONDITIONS DO NOT PERMIT THE USE OF FILTER FABRIC BARRIER, AND AS APPROVED BY THE ENGINEER.

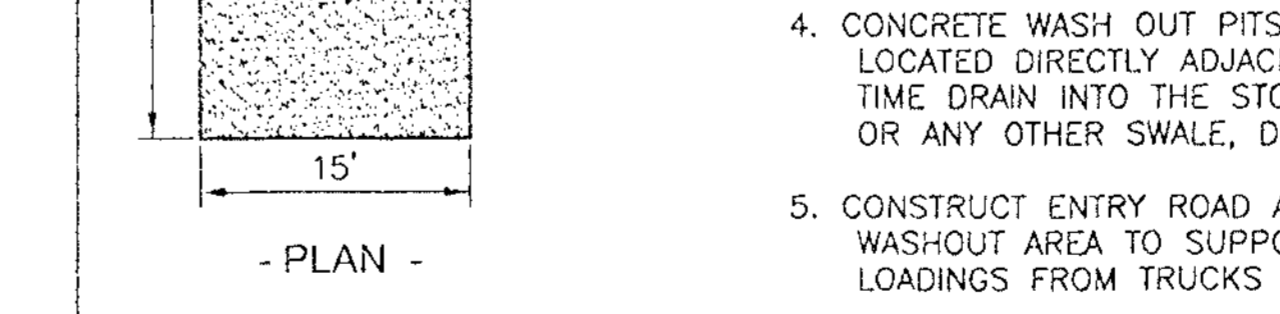
**INLET PROTECTION BARRIERS FOR STAGE I INLETS**  
SYMBOL: (IPB)



**CONCRETE TRUCK WASHOUT AREA**  
SYMBOL: (CTW)

**GENERAL NOTES:**

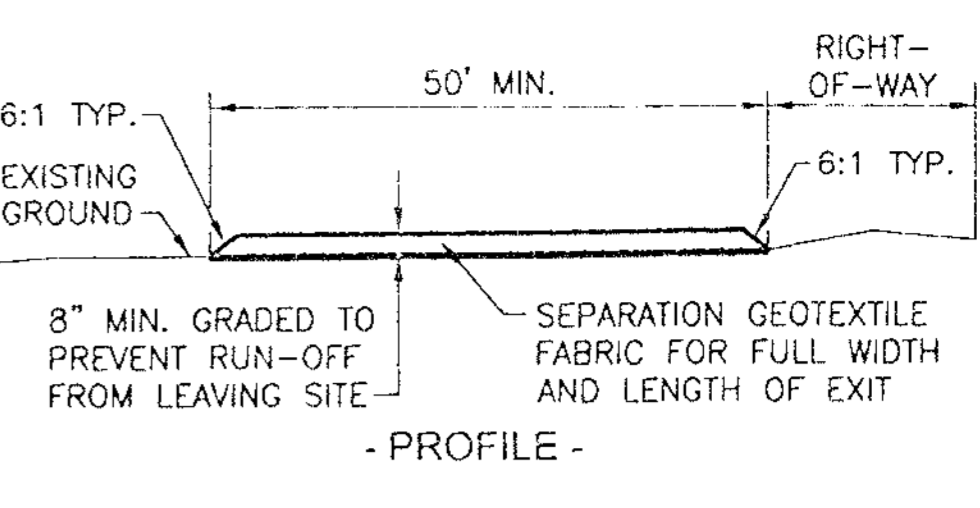
1. POST A SIGN READING "CONCRETE WASHOUT PIT" NEXT TO THE PIT.
2. VERBALLY INSTRUCT THE CONCRETE TRUCK DRIVERS WHERE THE PIT IS AND TO WASH OUT THEIR TRUCKS IN THE PIT AND NOWHERE ELSE.
3. UPON THE CONCRETE SETTING UP (CURING, DRYING OUT), THE CONCRETE WASTE SHALL BE REMOVED FROM THE PROJECT SITE AND DISPOSED OF PROPERLY BY THE CONTRACTOR. AFTER REMOVAL OF THE CONCRETE WASTE, THE WASH OUT PIT SHALL BE FILLED WITH CLEAN FILL MATERIAL AND COMPACTED TO IN-SITU CONDITIONS, OR AS DIRECTED BY THE PROJECT SPECIFICATIONS.
4. CONCRETE WASH OUT PITS SHALL NOT BE LOCATED DIRECTLY ADJACENT TO, NOR AT ANY TIME DRAIN INTO THE STORM SEWER SYSTEM OR ANY OTHER SWALE, DITCH, OR WATERWAY.
5. CONSTRUCT ENTRY ROAD AND BOTTOM OF WASHOUT AREA TO SUPPORT EXPECTED LOADINGS FROM TRUCKS EQUIPMENT.



**INLET PROTECTION BARRIERS FOR STAGE II INLETS**  
SYMBOL: (IPB-II)

**GENERAL NOTES:**

1. REMOVE SEDIMENT DEPOSIT WHEN THE SEDIMENT HAS ACCUMULATED TO ONE-THIRD THE HEIGHT OF THE BARRIER.
2. GRAVEL BAGS SHALL NOT BLOCK THROAT OF INLET UNLESS DIRECTED BY ENGINEER.



**STABILIZED CONSTRUCTION ACCESS**  
SYMBOL: (SC-1)

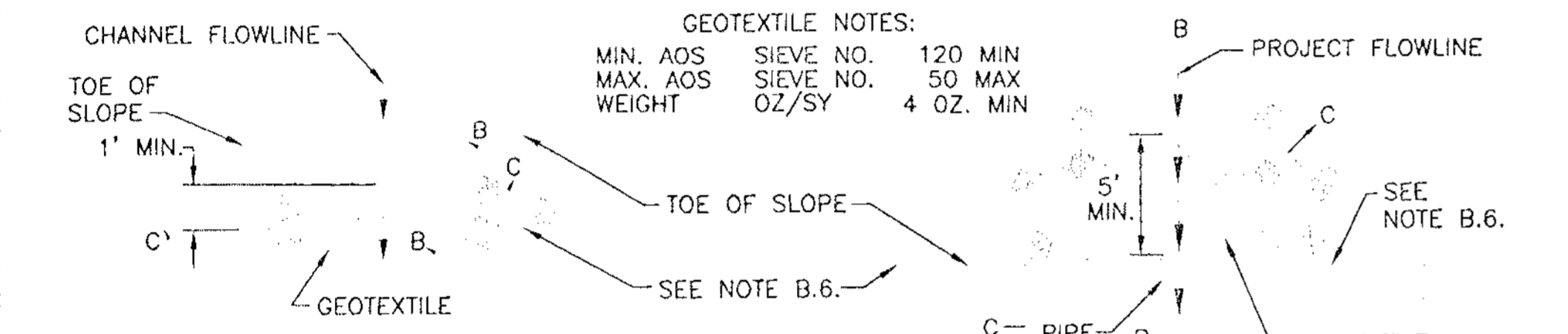
**GENERAL NOTES:**

1. MINIMUM LENGTH IS AS SHOWN ON CONSTRUCTION DRAWINGS OR 50 FEET, WHICHEVER IS MORE.
2. CONSTRUCT AND MAINTAIN CONSTRUCTION EXIT WITH CONSTANT WIDTH ACROSS ITS LENGTH, INCLUDING ALL POINTS OF INGRESS OR EGRESS.
3. UNLESS SHOWN ON THE CONSTRUCTION DRAWINGS, STABILIZATION FOR OTHER AREAS WILL HAVE THE SAME AGGREGATE THICKNESS AND WIDTH REQUIREMENTS AS THE STABILIZED CONSTRUCTION EXIT.
4. WHEN SHOWN ON THE CONSTRUCTION DRAWINGS, WIDEN OR LENGTHEN STABILIZED AREA TO ACCOMMODATE A TRUCK WASHING AREA. PROVIDE OUTLET SEDIMENT TRAP FOR THE TRUCK WASHING AREA.
5. PROVIDE PERIODIC TOP DRESSING WITH ADDITIONAL COARSE AGGREGATE TO MAINTAIN THE REQUIRED DEPTH OR WHEN SURFACE BECOMES PACKED WITH MUD.
6. PERIODICALLY TURN AGGREGATE TO EXPOSE A CLEAN DRIVING SURFACE.
7. MINIMUM 14' WIDTH FOR ONE WAY TRAFFIC AND 20' WIDTH FOR TWO WAY TRAFFIC.

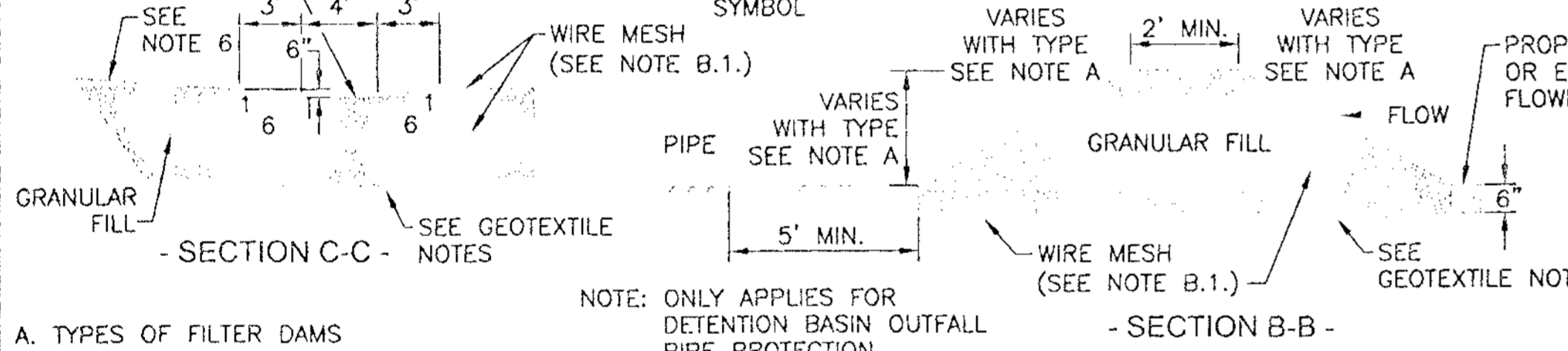
**STABILIZED CONSTRUCTION ACCESS**  
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**IN-CHANNEL FILTER DAM**  
SYMBOL: (RFD - TYPE)



**FILTER DAM AT DETENTION BASIN OUTFALL PIPE**  
SYMBOL: (RFD - TYPE)

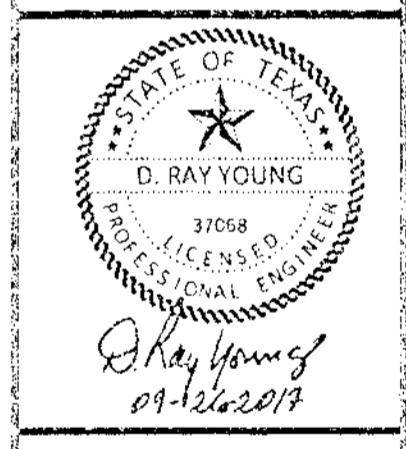
- A. TYPES OF FILTER DAMS**
1. TYPE 1 (NON-REINFORCED)
    - a. HEIGHT - 18-24 INCHES. MEASURE VERTICALLY FROM EXISTING GROUND TO TOP OF FILTER DAM.
    - b. TOP WIDTH - 2 FEET (MINIMUM)
    - c. SLOPES - 2:1 (MAXIMUM).
  2. TYPE 2 (REINFORCED).
    - a. HEIGHT - 18-36 INCHES. MEASURE VERTICALLY FROM EXISTING GROUND TO TOP OF FILTER DAM.
    - b. TOP WIDTH - 2 FEET (MINIMUM).
    - c. SLOPES - 2:1 (MAXIMUM).
  3. TYPE 3 (REINFORCED)
    - a. HEIGHT - 36-48 INCHES. MEASURE VERTICALLY FROM EXISTING GROUND TO TOP OF FILTER DAM.
    - b. TOP WIDTH - 2 FEET (MINIMUM).
    - c. SLOPES - 3:1 (MAXIMUM).
  4. TYPE 4 (GABION)
    - a. HEIGHT - 30 INCHES (MINIMUM). MEASURE VERTICALLY FROM EXISTING GROUND TO TOP OF FILTER DAM.
    - b. TOP WIDTH - 2 FEET (MINIMUM).
  5. TYPE 5. AS SHOWN ON THE PLANS.
- B. CONSTRUCT FILTER DAMS ACCORDING TO THE FOLLOWING CRITERIA UNLESS SHOWN OTHERWISE ON THE PLANS.**
1. TYPE 2 AND 3 FILTER DAMS: SECURE WITH 20 GAUGE GALVANIZED WOVEN WIRE MESH WITH 1 INCH DIAMETER HEXAGONAL OPENINGS.
  2. GRANULAR FILL:
    - a. PLACE ON MESH TO HEIGHT AND SLOPES SHOWN ON PLANS OR AS SPECIFIED BY THE ENGINEER.
    - b. 3-5 INCHES FOR ROCK FILTER DAM TYPES 1,2, AND 4 AND 4-8 INCHES FOR ROCK FILTER DAM TYPE REFER TO GRANULAR FILL IN SPECIFICATION SECTION NO. 02378-RIPRAP AND GRANULAR FILL.
  3. WIRE MESH: FOLD AT UPSTREAM SIDE OVER GRANULAR FILL AND TIGHTLY SECURED TO ITSELF ON THE DOWNSTREAM SIDE USING WIRE TIES OR HOG RINGS.
  4. IN STREAMS: SECURE OR STAKE MESH TO STREAM BED PRIOR TO AGGREGATE PLACEMENT.
  5. SEE SPECIFICATION SECTION NO. 02364-FILTER DAMS.
  6. EMBED ONE FOOT MINIMUM INTO SLOPE AND RAISE ONE FOOT HIGHER THAN CENTER OF DEPRESSED AREA AT SLOPE.

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REVISION	DATE
DESCRIPTION	M/D/Y

**WATER ENGINEERS, INC.**  
Water & Wastewater Treatment Consultants  
TEXAS BOARD OF PROFESSIONAL ENGINEERS FIRM No. 2066  
17230 HUFFMEISTER ROAD  
CYPRESS, TEXAS 77429  
TEL: 281-373-0500  
FAX: 281-373-1113

**CIVIL PLANS FOR THE CONSTRUCTION OF SUNBURST TRADING**  
15151 WEST DRIVE  
HOUSTON, TEXAS 77053



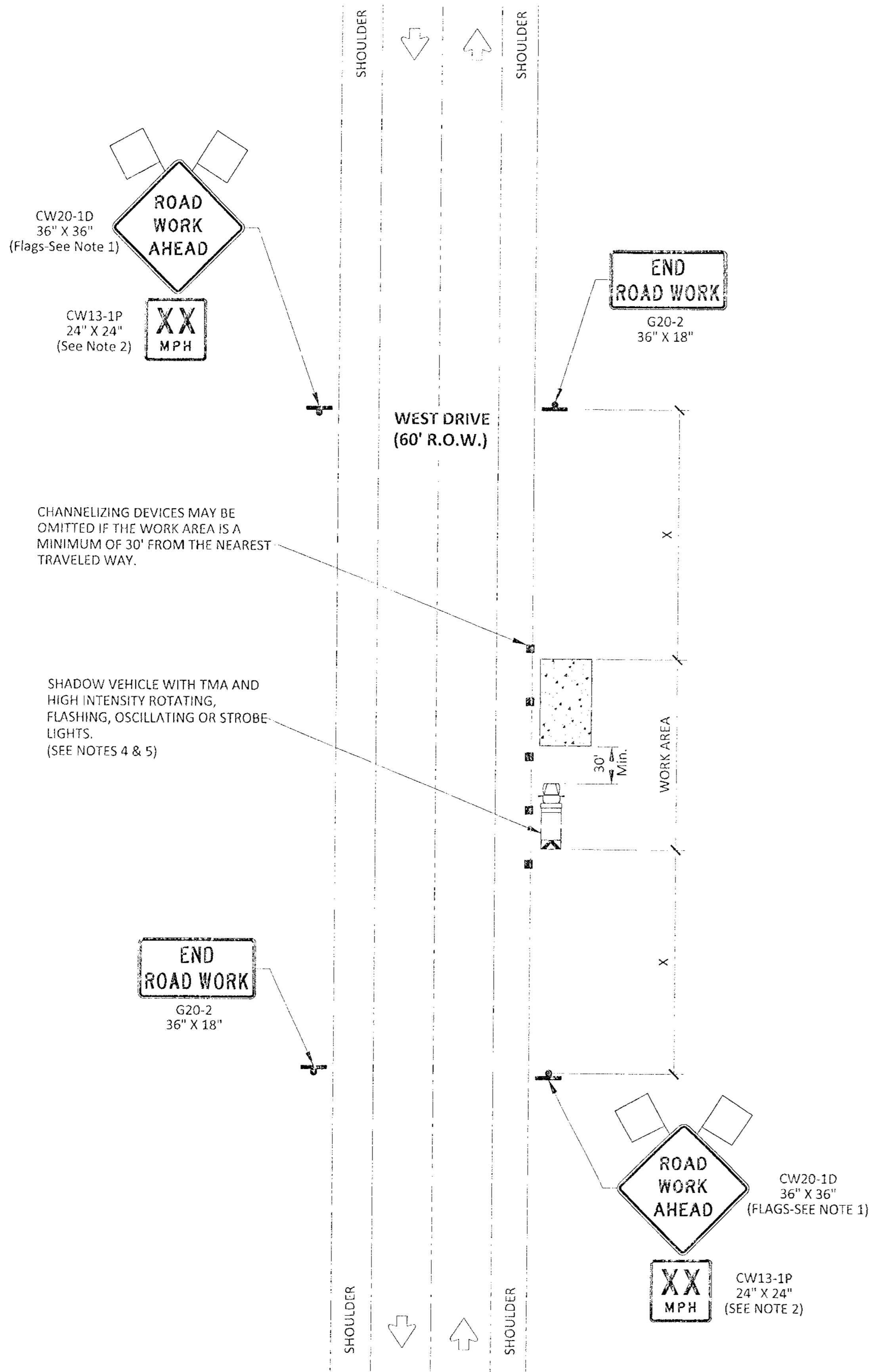
**CONCRETE WASHOUT PIT SIGN DETAIL (OR EQUIVALENT)**

**STORMWATER POLLUTION PREVENTION DETAILS**

APPROVED: *[Signature]*  
Development Coordinator

DATE: 12/3/15

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LEGEND			
	Type 3 Barricade		Channelizing Devices
	Heavy Work Vehicle		Truck Mounted Attenuator (TMA)
	Trailer Mounted Flashing Arrow Board		Portable Changeable Message Sign (PCMS)
	Sign		Traffic Flow
	Flag		Flagger

TRAFFIC CONTROL PLAN SECTION  
SHALL BE COMPLETED BY ENGINEER

ROADWAY	POSTED SPEED	TAPER LENGTH	SPACING CHANNELIZING DEVICES		SIGN SPACING	BUFFER SPACE
			TAPER	TANGENT		
WEST DRIVE	35	205	35	70	160	120

Posted Speed *	Formula	Minimum Desirable Taper Lengths "L"			Suggested Maximum Spacing of Channelizing Devices		Minimum Sign Spacing "X" Distance	Suggested Longitudinal Buffer Space "B"
		10' Offset	11' Offset	12' Offset	On a Taper	On a Tangent		
30	L = WS <sup>2</sup> / 60	150'	165'	180'	30'	60'	120'	90'
35		205'	225'	245'	35'	70'	160'	120'
40		265'	295'	320'	40'	80'	240'	155'
45	L=WS	450'	495'	540'	45'	90'	320'	195'
50		500'	550'	600'	50'	100'	400'	240'
55		550'	605'	660'	55'	110'	500'	295'
60		600'	660'	720'	60'	120'	600'	350'
65		650'	715'	780'	65'	130'	700'	410'
70		700'	770'	840'	70'	140'	800'	475'
75		750'	825'	900'	75'	150'	900'	540'

\* CONVENTIONAL ROADS ONLY  
 \*\* TAPER LENGTHS HAVE BEEN ROUNDED OFF. L=LENGTH OF TAPER(FT) W=WIDTH OF OFFSET(FT) S=POSTED SPEED(MPH)

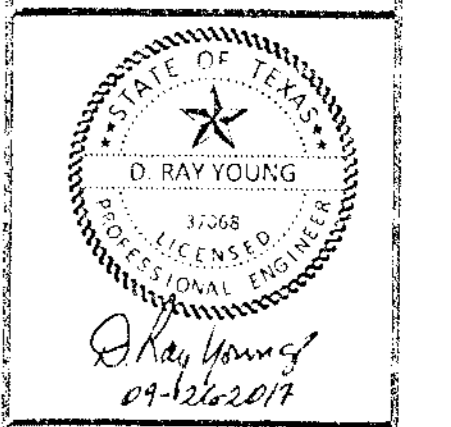
GENERAL NOTES

1. FLAGS ATTACHED TO SIGNS WHERE SHOWN ARE OPTIONAL.
2. ALL TRAFFIC CONTROL DEVICES ILLUSTRATED ARE REQUIRED, EXCEPT THOSE DENOTED WITH THE TRIANGLE SYMBOL ARE OPTIONAL.
3. INACTIVE WORK VEHICLES OR OTHER EQUIPMENT SHOULD BE PARKED NEAR THE RIGHT-OF-WAY LINE AND NOT PARKED ON THE PAVED SHOULDER.
4. A SHADOW VEHICLE WITH A TMA SHOULD BE USED ANYTIME IT CAN BE POSITIONED 30 TO 100 FEET IN ADVANCE OF THE AREA OF CREW EXPOSURE WITHOUT ADVERSELY AFFECTING THE PERFORMANCE OR QUALITY OF THE WORK. IF WORKERS ARE NO LONGER PRESENT BUT ROAD OR WORK CONDITIONS REQUIRE THE TRAFFIC CONTROL TO REMAIN IN PLACE, TYPE 3 BARRICADES OR OTHER CHANNELIZING DEVICES MAY BE SUBSTITUTED FOR THE SHADOW VEHICLE AND TMA.
5. ADDITIONAL SHADOW VEHICLES WITH TMAS MAY BE POSITIONED OFF THE PAVED SURFACE, NEXT TO THOSE SHOWN IN ORDER TO PROTECT WIDER WORK SPACES.
6. CONTRACTOR SHALL PROVIDE AND INSTALL TRAFFIC CONTROL DEVICES IN CONFORMANCE WITH PART VI OF TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (TMUTCD - LATEST EDITION WITH REVISIONS) DURING CONSTRUCTION.
7. NO LANES SHALL BE BLOCKED DURING CONSTRUCTION.
8. IF PROJECT IS WITHIN 400 FEET FROM A SIGNALIZED INTERSECTION, THE CONTRACTOR SHALL CONTACT HARRIS COUNTY ENGINEERING DEPARTMENT, TRAFFIC SIGNAL MAINTENANCE AT (713) 881-3210 FIVE (5) DAYS PRIOR TO THE START OF CONSTRUCTION.

REVISION	DATE
DESCRIPTION	M/D/YY

**WATER ENGINEERS, INC.**  
 Water & Wastewater Treatment Consultants  
 TEXAS BOARD OF PROFESSIONAL ENGINEERS FIRM No. 2066  
 17230 HUFFMEISTER ROAD  
 CYPRESS, TEXAS 77429  
 TEL: 281-373-0500  
 FAX: 281-373-1113

CIVIL PLANS FOR THE CONSTRUCTION OF  
**SUNBURST TRADING**  
 15151 WEST DRIVE  
 HOUSTON, TEXAS 77053



SHEET NAME:

**TRAFFIC CONTROL PLAN**

DRAWN BY: JLW

CHECKED BY: DRY

PROJECT No.: 5759.1

DATE: 8/31/2017

SHEET No.:

APPROVED: *[Signature]*  
 Development Coordinator  
 DATE: 8/31/17

**FORT BEND COUNTY ENGINEERING**  
FORT BEND COUNTY, TEXAS

Richard W. Staltes, P.E.  
County Engineer

**FORT BEND COUNTY  
CONSTRUCTION - GENERAL NOTES**

- FORT BEND COUNTY MUST BE INVITED TO THE PRE-CONSTRUCTION MEETING.
- CONTRACTOR SHALL NOTIFY FORT BEND COUNTY ENGINEERING DEPARTMENT 48 HOURS PRIOR TO COMMENCING CONSTRUCTION AND 48 HOUR NOTICE TO ANY CONSTRUCTION ACTIVITY WITHIN THE LIMITS OF THE PAVING AT CONSTRUCTION@FORTBENDCOUNTYTX.GOV.
- CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL PERMITS REQUIRED FROM FORT BEND COUNTY PRIOR TO COMMENCING CONSTRUCTION OF ANY IMPROVEMENTS WITHIN COUNTY ROAD RIGHT OF WAYS.
- ALL PAVING IMPROVEMENTS SHALL BE CONSTRUCTED IN ACCORDANCE WITH FORT BEND COUNTY "RULES, REGULATIONS AND REQUIREMENTS" RELATING TO THE APPROVAL AND ACCEPTANCE OF IMPROVEMENTS IN SUBDIVISIONS AS CURRENTLY AMENDED.
- ALL ROAD WIDTHS, CURB RADII AND CURB ALIGNMENT SHOWN INDICATES BACK OF CURB
- A CONTINUOUS LONGITUDINAL REINFORCING BAR SHALL BE USED IN THE CURBS.
- ALL CONCRETE PAVEMENT SHALL BE 5 Y. SACK CEMENT WITH A MINIMUM COMPRESSIVE STRENGTH OF 3500 PSI AT 28 DAYS. TRANSVERSE EXPANSION JOINTS SHALL BE INSTALLED AT EACH CURB RETURN AND AT A MAXIMUM SPACING OF 60 FEET.
- ALL WEATHER ACCESS TO ALL EXISTING STREETS AND DRIVEWAYS SHALL BE MAINTAINED AT ALL TIMES.
- 4" X 12" REINFORCED CONCRETE CURB SHALL BE PLACED IN FRONT OF SINGLE FAMILY LOTS ONLY. ALL OTHER AREAS SHALL BE 6" REINFORCED CONCRETE CURB.
- AT ALL INTERSECTION LOCATIONS, TYPE 7 RAMPS SHALL BE PLACED IN ACCORDANCE WITH TXDOT PED-12A STANDARD DETAIL SHEET A.D.A. - HANDICAP RAMPS SHALL BE INSTALLED WITH STREET PAVING AT ALL INTERSECTIONS AND COMPLY WITH CURRENT A.D.A. REGULATIONS.
- CURB HEADERS ARE REQUIRED AT CURB CONNECTIONS TO HANDICAP RAMPS, WITH NO CONSTRUCTION JOINT WITHIN 5' OF RAMPS.
- ALL INTERSECTIONS UTILIZING TRAFFIC CONTROL MEASURES SHALL HAVE A.D.A. WHEEL CHAIR RAMPS INSTALLED.
- GUIDELINES ARE SET FORTH IN THE TEXAS "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES", AS CURRENTLY AMENDED, SHALL BE OBSERVED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ADEQUATE FLAGMEN, SIGNING, STRIPING AND WARNING DEVICES, ETC., DURING CONSTRUCTION - BOTH DAY AND NIGHT.
- ALL RL-1 STOP SIGNS SHALL BE 30"X30" WITH DIAMOND GRADE SHEETING PER TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
- STREET NAME SIGNAGE SHALL BE ON A 9" HIGH SIGN FLAT BLADE W/REFLECTIVE GREEN BACKGROUND. STREET NAMES SHALL BE UPPER AND LOWERCASE LETTERING WITH UPPERCASE LETTERS OF 6" MINIMUM AND LOWERCASE LETTERS OF 4.5" MINIMUM. THE LETTERS SHALL BE REFLECTIVE WHITE. STREET NAME SIGNS SHALL BE MOUNTED ON STOP SIGN POST.
- A BLUE DOUBLE REFLECTORIZED BUTTON SHALL BE PLACED AT ALL FIRE HYDRANT LOCATIONS. THE BUTTON SHALL BE PLACED 12 INCHES OFF OF THE CENTERLINE OF THE STREET ON THE SAME SIDE AS THE HYDRANT.

**NOTE: FORT BEND COUNTY NOTES SUPERSEDE ANY CONFLICTING NOTES.**

INSPECTION. THE PROJECT AND ALL PARTS THEREOF SHALL BE SUBJECT TO INSPECTION FROM TIME TO TIME BY INSPECTORS DESIGNATED BY FORT BEND COUNTY. NO SUCH INSPECTIONS SHALL RELIEVE THE CONTRACTOR OF ANY OF ITS OBLIGATIONS HEREUNDER. NEITHER FAILURE TO INSPECT NOR FAILURE TO DISCOVER OR REJECT ANY OF THE WORK AS NOT IN ACCORDANCE WITH THE DRAWINGS AND SPECIFICATIONS, REQUIREMENTS AND SPECIFICATIONS OF FORT BEND COUNTY OR ANY PROVISION OF THIS PROJECT SHALL BE CONSTRUED TO IMPLY AN ACCEPTANCE OF SUCH WORK OR TO RELIEVE THE CONTRACTOR OF ANY OF ITS OBLIGATIONS HEREUNDER.

301 JACKSON ST., SUITE 401, RICHMOND, TX 77469  
PHONE 281-633-7500

**STANDARD F.B.C.D.D. NOTES**

- ALL DISTURBED AREAS WITHIN THE FORT BEND COUNTY DRAINAGE DISTRICT RIGHT-OF-WAY, EXCEPT THE CHANNEL BOTTOM, SHALL BE HYDRO-SEEDING AS PER FORT BEND COUNTY DRAINAGE DISTRICT SPECIFICATION ENTITLED "HYDRO-MULCH SEEDING" OR APPROVED EQUAL.
- BACKFILL TO BE COMPACTED IN NO GREATER THAN 1 FOOT LIFTS TO THE DENSITY OF THE UNDISTURBED ADJACENT SOIL.
- CONTRACTOR SHALL BE RESPONSIBLE FOR EXCAVATING CHANNEL FLOW LINE TO DESIGN ELEVATION AS SHOWN ON PLANS AND DOWNSIDE AS NECESSARY TO INSURE NO WATER IN STORM SEWER DURING "DRY" CONDITIONS.
- CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING FLOW IN CHANNEL DURING CONSTRUCTION AND RESTORING CHANNEL TO ORIGINAL CONDITION.
- ALL EXCAVATED MATERIAL IS TO BE REMOVED FROM THE F.B.C.D.D. RIGHT-OF-WAY. NO FILL IS TO BE PLACED WITHIN A DESIGNATED FLOOD PLAIN AREA WITHOUT FIRST OBTAINING A FILL PERMIT.
- CONTRACTOR, WITH THE ASSISTANCE OF THE ENGINEER IF NECESSARY, SHALL BE RESPONSIBLE FOR OBTAINING ALL APPLICABLE CITY, COUNTY, STATE, AND FEDERAL PERMITS.
- CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING AND RESTORING BACKSLOPE DRAINAGE SYSTEM ALONG F.B.C.D.D. RIGHT-OF-WAYS AND EASEMENTS.

**GRADING NOTES**

- GENERAL CONTRACTOR AND ALL SUBCONTRACTORS SHALL VERIFY THE SUITABILITY OF ALL EXISTING AND PROPOSED SITE CONDITIONS INCLUDING GRADES AND DIMENSIONS BEFORE STARTING CONSTRUCTION. THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY OF ANY DISCREPANCIES.
- BEFORE STARTING CONSTRUCTION, CONTRACTOR SHALL VERIFY BENCHMARK ELEVATION AND NOTIFY ENGINEER IF ANY DISCREPANCY AND/OR CONFLICT IS FOUND.
- CONTRACTOR SHALL ENSURE THERE IS POSITIVE DRAINAGE FROM THE PROPOSED BUILDINGS AND NO PONDING IN PAVED AREAS, AND SHALL NOTIFY ENGINEER IF ANY GRADING DISCREPANCIES ARE FOUND IN THE EXISTING AND PROPOSED GRADES PRIOR TO PLACEMENT OF PAVEMENT OR UTILITIES.
- CONTRACTOR SHALL PROTECT ALL MANHOLE COVERS, VALVE COVERS, VAULT LIDS, FIRE HYDRANTS, POWER POLES, GUY WIRES, AND TELEPHONE BOXES THAT ARE TO REMAIN IN PLACE AND UNDISTURBED DURING CONSTRUCTION.
- ALL EXISTING CONCRETE PAVING, SIDEWALK, AND CURB DEMOLITION SHALL BE REMOVED AND DISPOSED OF BY CONTRACTOR. DISPOSAL SHALL BE AT AN APPROVED OFF-SITE, LAWFUL LOCATION, UNLESS DIRECTED OTHERWISE BY THE OWNER.

**FORT BEND COUNTY ROAD & BRIDGE NOTES:**

CONTRACTOR SHALL COORDINATE ALL WORK WITHIN FORT BEND COUNTY ROAD RIGHT OF WAY OF WEST DRIVE WITH FORT BEND COUNTY ROAD AND BRIDGE DEPARTMENT, 281-342-4513

**STORM SEWER CONSTRUCTION NOTES**

- ALL STORM SEWERS TO BE ASTM C-76 CLASS 111 RCP, S.D.R. 35 PVC, ASTM 3034 WITH RUBBER GASKET JOINT, HANCOM HI-Q SURE-LOK 10.8 PIPE OR APPROVED EQUAL PIPE SHALL BE USED ASTM C-76 CLASS III RCP SHALL BE USED WHEN CONNECTING TO PUBLIC STORM SEWERS. PIPE GRADES ARE BASED ON CONCRETE PIPE TO PRODUCE 3 FPS MINIMUM VELOCITY.
- ALL SEWER UNDER PROPOSED OR FUTURE PAVEMENT AND TO A POINT ONE (1) FOOT BACK OF ALL PROPOSED OR FUTURE CURBS SHALL BE BACKFILLED WITH 1-1/2 SACK CEMENT/C.Y. STABILIZED SAND TO WITHIN ONE (1) FOOT OF SUBGRADE. THE REMAINING DEPTH OF TRENCH SHALL BE BACKFILLED WITH SUITABLE EARTH MATERIAL.
- ALL TRENCH BACKFILLS SHALL BE IN 8" LIFTS, WITH TESTS TAKEN AT 100 FOOT INTERVALS ON EACH LIFT, AND MECHANICALLY COMPACTED TO A DENSITY OF NOT LESS THAN 95% OF THE MAXIMUM DRY DENSITY AS DETERMINED BY THE STANDARD PROCTOR COMPACTION TEST (ASTM D-698/ASHTO T99).
- ALL STORM SEWER PIPES AND INLET LEADS SHALL BE 24" AND LARGER R.C.P. (C-76, CLASS III).
- ALL PROPOSED PIPE STUB-OUTS FROM MANHOLES AND INLETS ARE TO BE PLUGGED WITH 8" BRICK WALLS UNLESS OTHERWISE NOTED.
- CONTRACTOR SHALL PROVIDE 12" MINIMUM CLEARANCE AT STORM SEWER AND WATER LINE CROSSINGS.
- ADJUST MANHOLE COVERS TO GRADE CONFORMING TO REQUIREMENTS OF SECTION 2086-ADJUSTING MANHOLES, INLETS AND VALVE BOXES TO GRADE.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING, MAINTAINING, AND RESTORING ANY BACK SLOPE DRAINAGE SYSTEM DISTURBED AS A RESULT OF HIS WORK.
- ALL DITCHES SHALL BE REGRADED TO PROPOSED ELEVATIONS TO INSURE PROPER DRAINAGE. ALL OUTFALLS SHALL BE PROPERLY BACKFILLED AND COMPACTED. ALL DISTURBED AREAS SHALL BE REGRADED, SEEDDED, AND FERTILIZED.
- ALL DRIVEWAYS WILL BE LOCATED TO AVOID EXISTING CURB INLET STRUCTURES.

**SWPPP CONSTRUCTION NOTES**

- CONTRACTOR SHALL IMPLEMENT INLET PROTECTION DEVICES AND REINFORCED FILTER FABRIC BARRIER ALONG ROAD AND SIDE DITCHES AT LOCATIONS SHOWN ON THE TYPICAL STORM WATER POLLUTION PREVENTION (SWPPP) PLANS TO KEEP SILT AND OR EXCAVATED MATERIALS FROM ENTERING INTO THE STORM WATER INLETS AND DITCHES EVENTUALLY POLLUTING THE RECEIVING STORM.
- 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 SWEEP BACK INTO THE EXCAVATED AREA.
- CONTRACTOR SHALL CLEAN UP THE EXISTING STREET INTERSECTIONS AND DRIVEWAYS DAILY, AS NECESSARY, TO REMOVE ANY EXCESS MUD, SILT OR ROCK TRACKED FROM THE EXCAVATED AREA.
- CONTRACTOR SHALL FOLLOW GOOD HOUSEKEEPING PRACTICES DURING THE CONSTRUCTION OF THE PROJECT, ALWAYS CLEANING UP DIRT AND LOOSE MATERIAL AS CONSTRUCTION PROGRESSES.
- 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.
- CONTRACTOR TO BE RESPONSIBLE TO MAINTAIN EXISTING DITCHES AND OR CULVERTS FOR UNOBSTRUCTED DRAINAGE AT ALL TIMES. WHERE SODDING IS DISTURBED BY EXCAVATION OR BACKFILLING OPERATIONS, SUCH AREAS SHALL BE REPLACED BY SEEDING OR SODDING. SLOPES 4:1 OR STEEPER SHALL BE REPLACED BY BLOCK SODDING.

**WATER LINE CONSTRUCTION NOTES**

- UNLESS OTHERWISE NOTED, ALL WATER LINES 12-INCHES AND SMALLER SHALL HAVE A MINIMUM OF 4-FEET OF COVER AND WATER LINES 16-INCHES AND LARGER SHALL HAVE A MINIMUM OF 5-FEET OF COVER.
- SANITARY PRECAUTIONS MUST BE TAKEN DURING WATER LINE CONSTRUCTION, AS CALLED FOR BY AWWA STANDARDS. PRECAUTIONS INCLUDE, BUT ARE NOT LIMITED TO, KEEPING PIPE CLEAN AND CAPPED OR OTHERWISE EFFECTIVELY COVERING OPEN PIPE ENDS TO EXCLUDE INSECTS, ANIMALS OR OTHER SOURCES OF CONTAMINATION FROM UNFINISHED PIPE LINES AT TIMES WHEN CONSTRUCTION IS NOT IN PROGRESS.
- ALL WATER LINES, AFTER INSTALLATION, SHALL BE THOROUGHLY DISINFECTED ACCORDING TO TCEQ, CHAPTER 290 AND AWWA SPECIFICATION C-651 AND THEN FLUSHED BEFORE BEING PLACED INTO SERVICE. WATER SAMPLES WILL BE COLLECTED FOR BACTERIOLOGIC ANALYSIS AND MUST MEET THE TEXAS STATE DEPARTMENT OF HEALTH AND CITY OF HOUSTON REQUIREMENTS PRIOR TO PLACING THE LINES INTO SERVICE.
- PIPE MATERIAL (IF NOT A STEEL SECTION) SHALL BE POLY-VINYL CHLORIDE (P.V.C.) CONFORMING TO AWWA SPECIFICATION C-900, WITH BELL AND SPIGOT PUSH ON JOINTS.
- THE CONTRACTOR SHALL NOT OPERATE ANY EXISTING GATE VALVES. THE CONTRACTOR SHALL CONTACT THE MUNICIPAL UTILITY DISTRICT'S OPERATOR A MINIMUM OF 48 HOURS PRIOR TO MAKING ANY CONNECTIONS TO THE EXISTING WATER LINE AND TO OPERATE ANY EXISTING GATE VALVES.
- ALL WATER VALVES SHALL OPEN CLOCKWISE AND SHALL BE SUPPLIED AND INSTALLED IN ACCORDANCE WITH THE LATEST EDITION OF AWWA SPECIFICATION C-500 AND SHALL BE OF THE RESILIENT SEAT TYPE.
- WATER LINES PARALLEL TO SANITARY SEWER LINES SHALL BE INSTALLED WITH AT LEAST 9-FEET OF CLEARANCE FROM OUTSIDE TO OUTSIDE OF PIPE AND SHALL BE INSTALLED IN SEPARATE TRENCHES. CONTRACTOR MUST MAINTAIN A MINIMUM OF 8- FEET OF CLEARANCE BETWEEN OUTSIDE OF SANITARY SEWER MANHOLES AND WATER LINES AS SPECIFIED BY TCEQ, CHAPTER 317 (LATEST PRINTING).
- WATER LINES SHALL BE CONSTRUCTED SO THAT ALL FITTINGS WILL NOT BE LOCATED UNDER PROPOSED OR FUTURE PAVEMENT.
- THE UTILITY CONTRACTOR SHALL TURN FIRE HYDRANTS AND MAKE ALL FINAL ADJUSTMENTS AFTER COMPLETION OF PAVING. NO SEPARATE PAY.
- THIS PROJECT SHALL BE BUILT BY MEANS OF OPEN CUT EXCEPT AS NOTED ON THE DRAWINGS. CONTRACTOR TO DETERMINE THE LOCATIONS OF BORE PITS IN FIELD SUBJECT TO THE CITY ENGINEER'S APPROVAL.

**TRAFFIC NOTES:**

- CONTRACTOR SHALL PROVIDE AND INSTALL TRAFFIC CONTROL DEVICES IN CONFORMANCE WITH PART VI OF THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (TEXAS MUTCD, MOST RECENT EDITION WITH REVISIONS) DURING CONSTRUCTION.
- NO LANES SHALL BE CLOSED DURING THE HOURS OF 5:30 AM TO 7:00 PM MONDAY THRU FRIDAY IN DOWNTOWN/ MIDTOWN AREA.
- NO LANES SHALL BE CLOSED DURING THE HOURS OF 7:00 AM TO 9:00 AM AND 4:00 PM TO 6:00 PM MONDAY THRU FRIDAY.
- NO WORK, AND LANES SHALL BE CLOSED IN RESIDENTIAL AREAS FROM 7:00 PM TO 7:00 AM.
- CONTRACTOR SHALL MAINTAIN ONE LANE OF TRAFFIC IN EACH DIRECTION DURING WORK HOURS.
- CONTRACTOR SHALL MAINTAIN TRAFFIC LAW(S) ACCORDING TO TRAFFIC CONTROL PLANS, DURING WORK HOURS.
- CONTRACTOR SHALL COVER OPEN EXCAVATIONS WITH STEEL PLATES ANCHORED PROPERLY DURING NON-WORKING HOURS, AND OPEN LANES FOR NORMAL TRAFFIC FLOW.
- OFF DUTY UNIFORMED POLICE OFFICER(S) / FLAGGERS IS / ARE REQUIRED TO DIRECT TRAFFIC WHEN LANES ARE BLOCKED.
- IN THE EVENT WHEN NO "TRAFFIC CONTROL PLANS" EXIST AS PART OF CONTRACT DRAWINGS, THE CONTRACTOR SHALL PREPARE PLANS \* AND SUBMIT TO PLAN REVIEW SECTION FOR APPROVAL TEN WORKING DAYS PRIOR TO IMPLEMENTATION.
  - \* THESE PLANS SHALL BE DRAWN TO SCALE ON REPRODUCIBLE MYLARS AND SEALED BY A LICENSED ENGINEER IN THE STATE OF TEXAS. PLANS WILL BECOME A PART OF THE CONTRACT DRAWINGS.
- APPROVED COPIES OF THE "TRAFFIC CONTROL PLANS" AND LANE / SIDEWALK CLOSURE PERMITS SHALL BE AVAILABLE FOR INSPECTION AT THE JOBSITE AT ALL TIMES.

CONTRACTOR MUST SECURE "LANE / SIDEWALK CLOSURE PERMITS" FROM CITY'S TRAFFIC MANAGEMENT AND MAINTENANCE BRANCH BEFORE CLOSING A LANE / SIDEWALK. THE REQUEST MUST BE MADE AT LEAST TEN BUSINESS DAYS PRIOR TO THE DATE FOR WHICH THE CLOSURE IS SOUGHT. NOTE THAT WORKING HOURS MAY BE RESTRICTED OR THE REQUEST MAY BE DENIED. CALL 832-395-3020 FOR AN APPLICATION.

**AT&T TEXAS/SWBT FACILITIES**

- THE LOCATIONS OF AT&T TEXAS/SWBT FACILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION BEFORE COMMENCING WORK. HE AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY THIS FAILURE TO EXACTLY LOCATE AND PRESERVE THESE UNDERGROUND UTILITIES.
- THE CONTRACTOR SHALL CALL 1-800-344-8377 (TEXAS 811) A MINIMUM OF 48 HOURS PRIOR TO CONSTRUCTION TO HAVE UNDERGROUND LINES FIELD LOCATED.
- WHEN EXCAVATING WITHIN EIGHTEEN INCHES (18") OF THE INDICATED LOCATION OF AT&T TEXAS/SWBT FACILITIES, ALL EXCAVATIONS MUST BE ACCOMPLISHED USING NON-MECHANIZED EXCAVATION PROCEDURES. WHEN BORING, THE CONTRACTOR SHALL EXPOSE THE AT&T TEXAS/SWBT FACILITIES.
- WHEN AT&T TEXAS/SWBT FACILITIES ARE EXPOSED, THE CONTRACTOR WILL PROVIDE SUPPORT TO PREVENT DAMAGE TO THE CONDUIT DUCTS OR CABLES. WHEN EXCAVATING NEAR TELEPHONE POLES THE CONTRACTOR SHALL BRACE THE POLE FOR SUPPORT.
- THE PRESENCE OR ABSENCE OF AT&T TEXAS/SWBT UNDERGROUND CONDUIT FACILITIES OR BURIED CABLE FACILITIES SHOWN ON THESE PLANS DOES NOT MEAN THAT THERE ARE NO DIRECT BURIED CABLES OR OTHER CABLES IN CONDUIT IN THE AREA.
- PLEASE CONTACT THE AT&T TEXAS DAMAGE PREVENTION MANAGER ROOSEVELT LEE JR. AT (713)567-4552 OR E-MAIL HIM AT RL7259@ATT.COM, IF THERE ARE QUESTIONS ABOUT BORING OR EXCAVATING NEAR OUR AT&T TEXAS/SWBT FACILITIES.

**CAUTION: UNDERGROUND GAS FACILITIES**

LOCATIONS OF CENTERPOINT ENERGY MAIN LINES (TO INCLUDE CENTERPOINT ENERGY, INTRASTATE PIPELINE, LLC. WHERE APPLICABLE) ARE SHOWN IN AN APPROXIMATE LOCATION ONLY. SERVICE LINES ARE USUALLY NOT SHOWN. OUR SIGNATURE ON THESE PLANS ONLY INDICATES THAT OUR FACILITIES ARE SHOWN IN APPROXIMATE LOCATION. IT DOES NOT IMPLY THAT A CONFLICT ANALYSIS HAS BEEN MADE. THE CONTRACTOR SHALL CONTACT THE UTILITY COORDINATING COMMITTEE AT 1-800-545-6005 OR 811 A MINIMUM OF 48 HOURS PRIOR TO CONSTRUCTION TO HAVE MAIN AND SERVICE LINES FIELD LOCATED.

- WHEN CENTERPOINT ENERGY PIPE LINE MARKINGS ARE NOT VISIBLE, CALL (713) 945-8036 OR (713) 945-8037 (7:00 A.M. TO 4:30 P.M.) FOR STATUS OF LINE LOCATION REQUEST BEFORE EXCAVATION BEGINS.
- WHEN EXCAVATING WITHIN EIGHTEEN INCHES (18") OF THE INDICATED LOCATION OF CENTERPOINT ENERGY FACILITIES, ALL EXCAVATION MUST BE ACCOMPLISHED USING NON-MECHANIZED EXCAVATION PROCEDURES.
- WHEN CENTERPOINT ENERGY FACILITIES ARE EXPOSED, SUFFICIENT SUPPORT MUST BE PROVIDED TO THE FACILITIES TO PREVENT EXCESSIVE STRESS ON THE PIPING.
- FOR EMERGENCIES REGARDING GAS LINES CALL (713) 659-3552 OR (713) 207-4200.

THE CONTRACTOR IS FULLY RESPONSIBLE FOR ANY DAMAGES CAUSED BY HIS FAILURE TO EXACTLY LOCATE AND PRESERVE THESE UNDERGROUND FACILITIES.

**WARNING: OVERHEAD ELECTRICAL LINES**

OVERHEAD LINES MAY EXIST ON THE PROPERTY. THE LOCATION OF OVERHEAD LINES HAS NOT BEEN SHOWN ON THESE DRAWINGS AS THE LINES ARE CLEARLY VISIBLE, BUT YOU SHOULD LOCATE THEM PRIOR TO BEGINNING ANY CONSTRUCTION. TEXAS LAW, SECTION 752, HEALTH & SAFETY CODE FORBIDS ACTIVITIES THAT OCCUR IN CLOSE PROXIMITY TO HIGH VOLTAGE LINES, SPECIFICALLY:

- ANY ACTIVITY WHERE PERSON OR THINGS MAY COME WITHIN SIX(6) FEET OF LIVE OVERHEAD HIGH VOLTAGE LINES; AND
- OPERATING A CRANE, DERRICK, POWER SHOVEL, DRILLING RIG, PILE DRIVER, HOISTING EQUIPMENT, OR SIMILAR APPARATUS WITHIN 10 FEET OF LIVE OVERHEAD HIGH VOLTAGE LINES.

PARTIES RESPONSIBLE FOR THE WORK, INCLUDING CONTRACTORS ARE LEGALLY RESPONSIBLE FOR THE SAFETY OF CONSTRUCTION WORKERS UNDER THIS LAW. THIS LAW CARRIES BOTH CRIMINAL AND CIVIL LIABILITY. TO ARRANGE FOR LINES TO BE TURNED OFF OR REMOVED CALL CENTERPOINT ENERGY AT (713) 207-2222.

**ACTIVITIES ON OR ACROSS CENTERPOINT ENERGY FEE OR EASEMENT PROPERTY**

NO APPROVAL TO USE, CROSS OR OCCUPY CENTERPOINT ENERGY FEE OR EASEMENT PROPERTY IS GIVEN. IF YOU NEED TO USE CENTERPOINT PROPERTY, PLEASE CONTACT OUR SURVEYING & RIGHT OF WAY DIVISION AT (713) 207-6248 OR (713) 207-5769.

**ABBREVIATIONS**

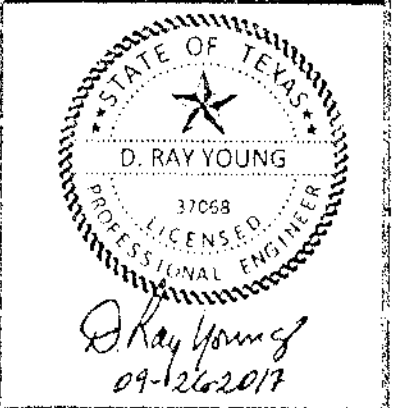
A.B.	ALL BELL
A.E.	AERIAL EASEMENT
B.B.	BACK TO BACK
B.C.	BACK OF CURB
B.L.	BASE LINE
B.L.	BUILDING LINE
B.O.V.	BLOW OFF VALVE
C-C	CENTER TO CENTER
C.G.M.P.	CORRUGATED GALVANIZED METAL PIPE
CL	CENTER LINE
C.O.H.	CITY OF HOUSTON
CONC.	CONCRETE
CTR.	CENTER
DBL	DOUBLE
D.E.	DRAINAGE EASEMENT
D.I.P.	DUCTILE IRON PIPE
EL.	ELEVATION
E.P.	EDGE OF PAVEMENT
E.R.	END OF RADIUS
ESMT.	EASEMENT
EXIST.	EXISTING
F.H.	FIRE HYDRANT
FL	FLOW LINE
G.	GUTTER
G.V.	GATE VALVE
H.B.	HIGH BANK
H.G.L.	HYDRAULIC GRADE LINE
H.M.A.C.	HOT MIX ASPHALTIC COATING
H.P.	HIGH PRESSURE
I.P.	INTERMEDIATE PRESSURE
L.E.B.	LARGE END BELL
M.H.	MANHOLE
M.U.D.	MUNICIPAL UTILITY DISTRICT
N/A	NOT APPLICABLE
N.G.	NATURAL GROUND
O.C.	ON CENTER
P.A.E.	PERMANENT ACCESS EASEMENT
P.C.	POINT OF CURVATURE
P.C.C.	POINT OF COMPOUND CURVATURE
P.I.	POINT OF INTERSECTION
PL	PROPERTY LINE
PLA.	PLASTIC
P.P.	POWER POLE
P.R.C.	POINT OF REVERSE CURVATURE
P.T.	POINT OF TANGENCY
P.U.D.	PUBLIC UTILITY DISTRICT
P.U.E.	PUBLIC UTILITY EASEMENT
P.V.	PLUG VALVE
P.V.C.	POLY VINYL CHLORIDE
PVT.	PRIVATE
PVMT.	PAVEMENT
R.	RADIUS
RCS	REINFORCED CONCRETE BOX
RCP	REINFORCED CONCRETE PIPE
RED.	REDUCER
R.O.W.	RIGHT-OF-WAY
SAN.SWR.	SANITARY SEWER
S.S.E.	SANITARY SEWER EASEMENT
STM.SWR.	STORM SEWER
STM.S.E.	STORM SEWER EASEMENT
S.E.B.	SMALL END BELL
SGL.	SINGLE
STL.	STEEL
T.C.	TOP OF CURB
T.S.&V.	TAPPING SLEEVE AND VALVE
U.E.	UTILITY EASEMENT
VOL.	VOLUME
W.L.E.	WATER LINE EASEMENT
W.S.E.	WATER SURFACE ELEVATION

REVISION	DATE
DESCRIPTION	M/D/Y

**WATER ENGINEERS, INC.**  
Water & Wastewater Treatment Consultants  
TEXAS BOARD OF PROFESSIONAL ENGINEERS FIRM No. 20660  
17230 HUFFMEISTER ROAD  
CYPRESS, TEXAS 77429  
TEL: 281-373-0500  
FAX: 281-373-1113

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CIVIL PLANS FOR THE CONSTRUCTION OF  
**SUNBURST TRADING**  
15151 WEST DRIVE  
HOUSTON, TEXAS 77053



SHEET NAME:

**GENERAL NOTES**

DRAWN BY: JLW

CHECKED BY: DRY

PROJECT No.: 5759.1

DATE: 9/25/2017

SHEET No.:

12 OF 12

APPROVED: *[Signature]*  
Development Coordinator

DATE: 9/25/17