OUTPARCEL DEVELOPMENT RETAIL TRACT E

720/722 US 79 WEST TOWNWEST COMMONS

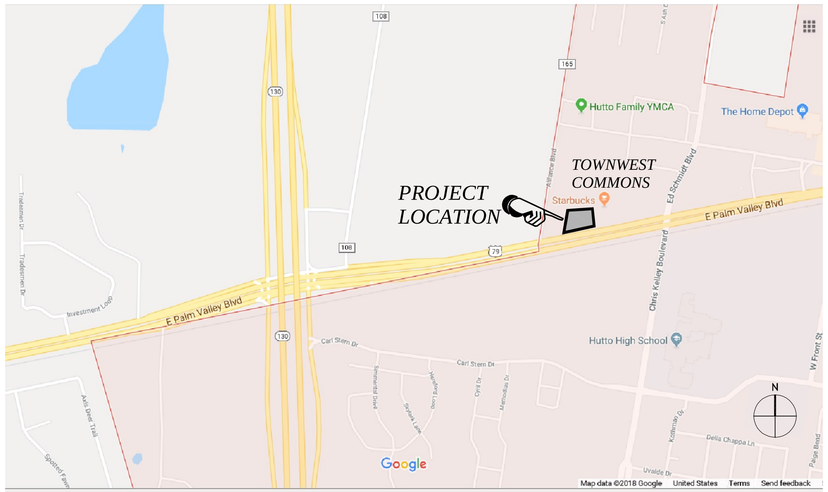
HUTTO, TX 78634

AS BUILT WORKMAN

5/226/2020

SITE PLAN

NOT TO SCALE



NOTE: THE REVIEW AND APPROVAL IS FOR THE SHELL ONLY AND THAT NO TENANT STRUCTURE, NOR MEP HAVE BEEN REVIEWED OR APPROVED AS PART OF THIS SUBMITTAL. ALL TENANT FITOUTS SHALL BE COMPLETED UNDER SEPARATE PERMIT.

PROJECT DATA:

LOCATION: TOWNWEST COMMONS PLANNED UNIT DEVELOPMENT

SCOPE: OUTPARCEL DEVELOPMENT OF TWO LEASE BUILDING SHELLS.
EAST BUILDING, BUILDING A, 7,910 S.F.
WEST BUILDING, BUILDING B, 7,350 S.F.
FUTURE MERCANTILE OR RESTAURANT OCCUPANCY, ASSUMED.

CODE:

BUILDING CODE	IBC 2009
FIRE CODE	IFC 2009
MECHANICAL CODE	IMC 2009
PLUMBING CODE	IPC 2009
ELECTRICAL CODE	NEC 2008
ENERGY CODE	IEC 2015
ACCESSIBILITY CODE	TAS 2012

CONSTRUCTION TYPE: II-B, FULLY SPRINKLERED

ALLOWABLE BUILDING AREA: 37,500

ACTUAL BUILDING AREA: BUILDING A, 7,910 S.F.
BUILDING B, 7,350 S.F.
TOTAL AREA, 15,260 S.F.

OCCUPANT LOADING: T.B.D.

TOTAL BUILDING EXITING PROVIDED: BUILDING A, 4 EXITS @ 3'-0" = 12'-0"
BUILDING B, 4 EXITS @ 3'-0" = 12'-0"

TRAVEL DISTANCE: BUILDING IS FULLY SPRINKLERED W/ LESS THAN 250 FT. MAX. TRAVEL DISTANCE TO ANY EXIT

PARKING DATA: TOTAL PARKING COUNT = 105 SPACES
TOTAL BUILDING AREA = 15,260 S.F.
OCCUPANCY T.B.D. ANTICIPATED OCCUPANCY OF MERCANTILE (ASSUMED).

REQUIRED PARKING @ 1 SPACE/400 S.F. (MINIMUM) = 38 SPACES.
@ 1 SPACE/200 S.F. (MAXIMUM) = 76 SPACES

BELOW IS THE LIST OF SPECIAL INSPECTIONS AS REQUIRED BY THE CITY OF HUTTO. THE CONTRACTOR SHALL DETERMINE WHICH INSPECTIONS APPLY TO THIS PROJECT AND COORDINATE THE INSPECTION WITH THE CITY.

HUTTO TEXAS

REQUEST **INSPECTION**

Development Services/Building Division
210 US 79 East, Suite 103
Hutto, Texas 78634

512-846-2640
Fax 512-759-5962
www.huttotx.gov

Fax Inspections to: 512-759-5962
Email Inspections to: inspections@huttotx.gov

Please note: All Inspection requests must be received in writing to Inspections.

Address:	**Date Needed:**
Permit#	**Subdivision:**
Today's Date:	**Requestor's Phone:**
Company/Builder:	**Requestor's Fax:**
Requestor's Name:	**Email Address:**

Please check type of inspection requested:

	STATUS		STATUS	Misc Inspections:	STATUS
☐ Temp Power		☐ Permanent Meter		☐ Grease Trap	
☐ Layout/ Plumbing Rough		☐ Electrical Final		☐ Pool Layout	
☐ Sewer and Water		☐ Plumbing Final		☐ Pool Bond	
☐ Copper		☐ Mechanical Final		☐ Pool Final	
☐ Foundation		☐ Gas Final		☐ Hood	
☐ Plumbing Top Out		☐ Flatwork		☐ Gas Underground	
☐ Frame		☐ Right-of-Way (Driveway/Sidewalk)		☐ Water Softener	
☐ Electrical Rough		☐ Final Right-of-Way		☐ Irrigation/ Back-flow	
☐ Mechanical Rough		☐ Landscape		☐ Water Heater Replacement	
☐ Gas Rough		☐ Building Final		☐ HVAC Replacement	
☐ Insulation		☐ Certificate of Occupancy		☐ P-Trap	
☐ Wallboard		☐ Other:		☐ Fire/Fire Final	

Status: P=Pass / PP= Partial Pass / F=Failed (re-inspection required) / NA = Not Applicable / C= Cancelled

Comments:

	Inspector Signature:	Date:

Note: All responsibility for the adequacy of these plans remains with the Engineer who prepared them. In approving these plans, the City of Hutto and Williamson County must rely upon the adequacy of the work of the Design Engineer.

INDEX OF DRAWINGS

● ISSUED

		DATE	DESCRIPTION: FOR PERMIT & REVIEW 9-14-18	FOR PRICING 11-14-18	FOR PERMIT 3-15-19	UPDATE #1 5-14-19	FOR CONSTRUCTION 7-2-19
A0.0	COVER SHEET		●	●	●	●	
FL1.0	FIRE LANE PLAN				●	●	
	CIVIL:						
C1 OF 2	TOPOGRAPHIC SURVEY		●	●	●	●	
C 2 OF 2	TOPOGRAPHIC SURVEY		●	●	●	●	
C-1	GRADING & DRAINAGE		●	●	●	●	
C1-A	GRADING & DRAINAGE ALTERNATE BID ITEMS		●	●	●	●	
C1-B	DRAINAGE LAYOUT		●	●	●	●	
C-2	STORM SEWER LAYOUT		●	●	●	●	
C-2A	STORM SEWER LAYOUT ALTERNATE BID ITEMS				●	●	
C-2B	STORM SEWER CALCULATION TABLE		●	●	●	●	
C-3	WATER & SANITARY LAYOUT		●	●	●	●	
C-4	PAVING JOINT LAYOUT		●	●	●	●	
C-4A	PAVING JOINT LAYOUT ALTERNATE BID ITEMS		●	●	●	●	
C-5	SWPPP LAYOUT		●	●	●	●	
C-6	SWPPP NOTES & DETAILS		●	●	●	●	
C-7	GENERAL NOTES & DETAILS				●	●	
C-8	CITY OF HUTTO NOTES & DETAILS				●	●	
	LANDSCAPING & IRRIGATION:						
L1.1	PLANTING PLAN		●	●	●	●	
L1.2	LANDSCAPE DETAILS		●	●	●	●	
L1.3	ROCKSCAPE PLAN				●	●	
L2.1	IRRIGATION PLAN		●	●	●	●	
L2.2	IRRIGATION DETAILS		●	●	●	●	
	ARCHITECTURAL:						
AS1.0	SITE PLAN		●	●	●	●	
AS1.1	SITE DETAILS		●	●	●	●	
A1.0	BUILDING PLAN, BUILDING A		●	●	●	●	
A1.1	BUILDING PLAN, BUILDING B		●	●	●	●	
A1.2	SOFFIT PLANS, BUILDINGS A & B		●	●	●	●	
A1.3	ROOF PLAN, BUILDING A		●	●	●	●	
A1.4	ROOF PLAN, BUILDING B		●	●	●	●	
A1.5	SIDEWALK PLAN		●	●	●	●	
A2.0	EXTERIOR ELEVATIONS & FINISH SCHEDULE		●	●	●	●	
A2.1	EXTERIOR ELEVATIONS		●	●	●	●	
A3.0	WALL SECTIONS		●	●	●	●	
A3.1	WALL SECTIONS		●	●	●	●	
A3.2	WALL SECTIONS		●	●	●	●	
A3.4	WALL SECTIONS		●	●	●	●	
A3.5	WALL SECTIONS		●	●	●	●	
A4.0	BUILDING DETAILS		●	●	●	●	
A4.1	BUILDING DETAILS		●	●	●	●	
A4.2	BUILDING DETAILS						
	STRUCTURAL:						
S0.0	GENERAL NOTES		●	●	●	●	
S0.1	GENERAL NOTES		●	●	●	●	
S1.1	BUILDING A FOUNDATION PLAN		●	●	●	●	
S1.2	BUILDING B FOUNDATION PLAN		●	●	●	●	
S2.1	BUILDING A ROOF FRAMING PLAN		●	●	●	●	
S2.2	BUILDING B ROOF FRAMING PLAN		●	●	●	●	
S2.3	HIGH ROOF FRAMING PLAN		●	●	●	●	
S2.4	CANOPY FRAMING PLAN		●	●	●	●	
S3.1	BUILDING A PANEL ELEVATIONS		●	●	●	●	
S3.2	BUILDING A PANEL ELEVATIONS		●	●	●	●	
S3.3	BUILDING B PANEL ELEVATIONS		●	●	●	●	
S3.4	BUILDING B PANEL ELEVATIONS		●	●	●	●	
S3.5	PANEL DETAILS		●	●	●	●	
S4.1	FOUNDATION DETAILS		●	●	●	●	
S4.2	FOUNDATION DETAILS		●	●	●	●	
S5.1	FRAMING DETAILS		●	●	●	●	
S5.2	FRAMING DETAILS		●	●	●	●	
S5.3	FRAMING DETAILS		●	●	●	●	
	MEP:						
EP0.1	PHOTOMETRIC SITE PLAN		●	●	●	●	
EP 1.0	ELECTRICAL/PLUMBING SITE PLAN		●	●	●	●	
E1.0	ELECTRICAL FLOOR PLAN BLDG A		●	●	●	●	
E1.1	ELECTRICAL FLOOR PLAN BLDG B		●	●	●	●	
E2.0	ELECTRICAL ONE LINE DIAGRAM-BLDG A & B		●	●	●	●	
E2.1	ELECTRICAL PANEL SCHEDULES & DETAILS		●	●	●	●	
E3.0	ELECTRICAL SPECIFICATIONS, DETAILS & LEGENDS		●	●	●	●	
P1.0	PLUMBING FLOOR PLAN, BLDG A		●	●	●	●	
P1.1	PLUMBING FLOOR PLAN, BLDG B		●	●	●	●	
P2.0	PLUMBING SCHEDULE, NOTES & LEGEND		●	●	●	●	
P3.0	PLUMBING DETAILS		●	●	●	●	

Date issued/revised

14 SEP 2018 FOR PERMIT & REVIEW
14 NOV 2018 FOR PRICING
15 MAR 2019 FOR PERMIT (1)
14 MAY 2019 BLDG PERMIT RESPONSE (2)
2 JUL 2019 FOR CONSTRUCTION
8 JUL 2019 REVISED FOR CONSTRUCTION (3)

OWNER

NEWQUEST PROPERTIES
8827 W. SAM HOUSTON PARKWAY N.
SUITE #200 HOUSTON, TEXAS 77040
(281) 477-4357 - PHONE

CIVIL ENGINEER

(CONSULTANT TO OWNER)
TEXAS ENGINEERING & MAPPING CO.
12718 CENTURY DR.
STAFFORD, TX 77477
PHONE: (281) 491-2525
FAX: (281) 491-2535
SCOTTY SCHMIDT
SSCHMIDT@TEAM-CIVIL.COM

LANDSCAPE ARCHITECT

CBM LANDSCAPE
18135 FM 362
NAVASOTA, TX 77868
PHONE: (832) 428-1209
CHARLES BRIDGES
CBRIDGES@CMBLANDARCH.COM

ARCHITECT

OSBORN & VANE ARCHITECTS, INC.

2000 BERING DRIVE, SUITE #410
HOUSTON, TEXAS 77057
PHONE: (713) 781-5262
FAX: (713) 781-5347
JASON CHAPMAN, AIA
JCHAPMAN@OVARC.COM

STRUCTURAL

CJG ENGINEERS - HOUSTON LLC
3200 WILCREST DRIVE, SUITE 305
HOUSTON, TX 77042
PHONE: (713) 780-3345
BRITT GARDNER
BGARDNER@CJGENGINEERS.COM

MEP ENGINEER

SALAS O'BRIEN LLC
10930 W. SAM HOUSTON PARKWAY N.
HOUSTON, TEXAS 77064 (281) 664-1900 -
PHONE (281) 664-1912 - FAX TEXAS
REGISTERED ENGINEERING FIRM F-4111

OSBORN & VANE ARCHITECTS, inc

2000 Bering Drive, Suite 410
Houston, Texas 77057
713 781 5262
Fax 713 781 5347
Members American Institute of Architects

SHELL BUILDING & SITE WORK DEVELOPMENT

720/722 US 7 WEST TOWNWEST COMMONS
HUTTO, TX 78634

Project No.	18064
Drawn	JS
Checked	BS

INFORMATION SHEET

Sheet No. A0.0

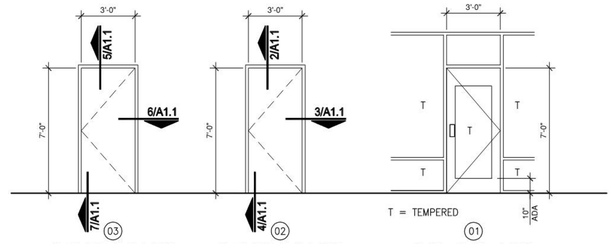
HARDWARE SET 1 (ENTRY)		
1	EA	DEAD BOLT W/ THUMBTURN
1	EA	EXIT INDICATOR
BALANCE OF DOOR HARDWARE BY DOOR SUPPLIER		

HARDWARE SET 2 (REAR DOOR)		
3	EA	HINGE
1	EA	DEAD BOLT W/ THUMB TURN
1	EA	CLOSER
1	EA	DOOR STOP
1	EA	DOOR SWEEP
1	EA	THRESHOLD
1	EA	WEATHER STRIPPING
1	EA	RAIN DRIP
1	EA	OFFSET LATCH GUARD

HARDWARE SET 3 (RISER ROOMS		
3	EA	HINGE
1	EA	KEYPAD LOCK SET (*) 1
1	EA	CLOSER
1	EA	DOOR STOP–WALL MOUNT
1	EA	DOOR SWEEP
1	EA	THRESHOLD
1	EA	WEATHER STRIPPING
1	EA	RAIN DRIP
1	EA	OFFSET LATCH GUARD

1

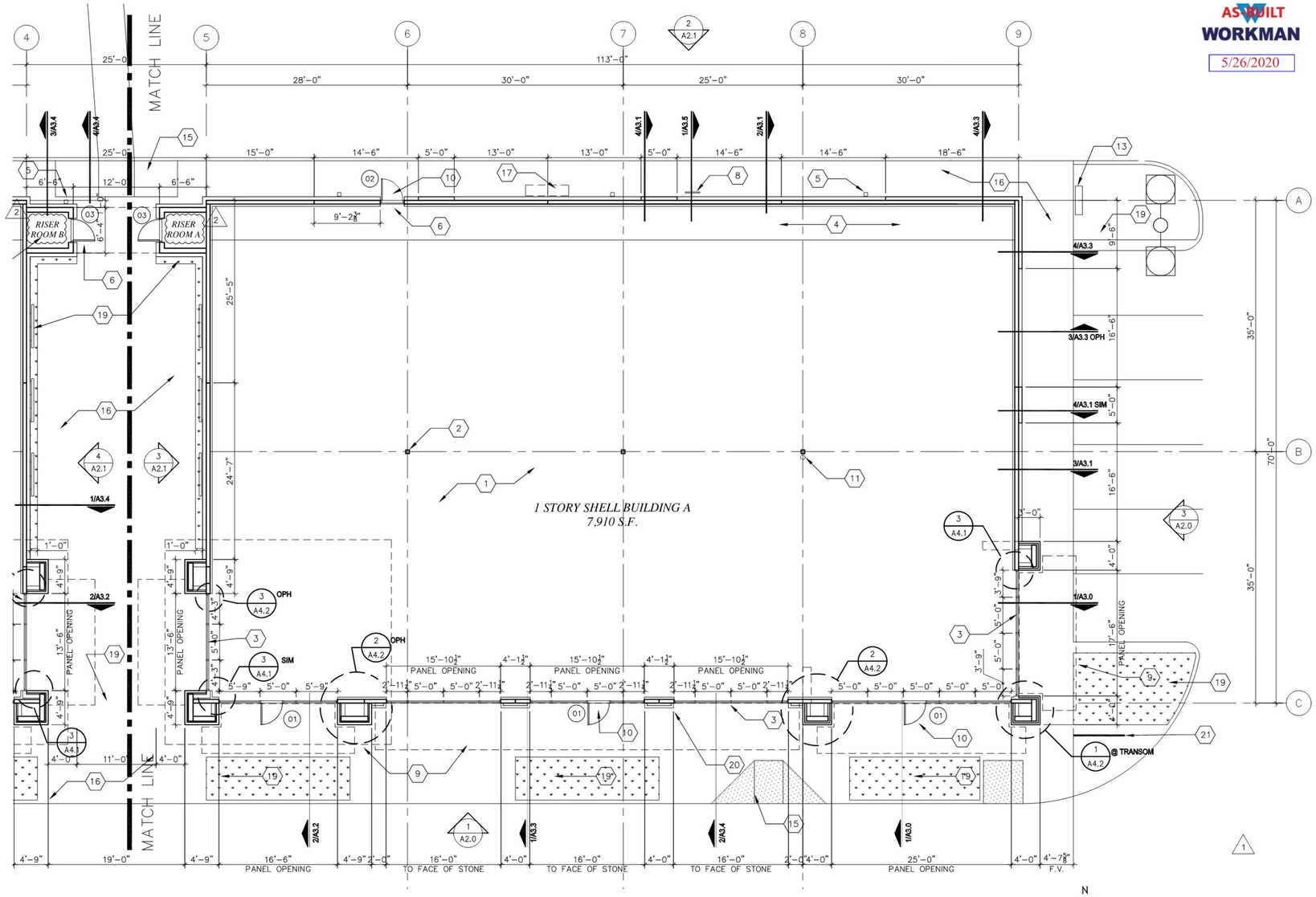
KEYPAD LOCK SET (*) – MODEL, IQ1LITE. MFR, MARKS USA. FINISH, 19 BLACK POWDER COAT.



2 DOOR & HARDWARE SCHEDULE

1/4"= 1'-0"

AS BUILT
WORKMAN
5/26/2020



1 FLOOR PLAN BUILDING A

1/8"= 1'-0"

N

0 4' 8' 16' 24'

Date issued/revised

14 SEP 2018 FOR PERMIT & REVIEW
14 NOV 2018 FOR PRICING
15 MAR 2019 FOR PERMIT 1
14 MAY 2019 BLDG PERMIT RESPONSE 2
2 JUL 2019 FOR CONSTRUCTION

NOTES TO SHEET A1.0 & A1.1:

1. REFER CIVIL DWGS FOR F.F. ELEVATION.
2. STEEL COLUMN. RE: STRUC DWGS.
3. SCHEDULED ALUMINUM & GLASS STOREFRONT. RE: EXTERIOR FINISH SCHEDULE
4. 5 FOOT SLAB LEAVE OUT. RE: STRUC DWGS.
5. 6"X6" PREFINISHED MTL DOWNSPOUT. TIE INTO STORM LINE. RE: CIVIL DWG. COORDINATE FINAL LOCATIONS W/ ELECTRICAL SERVICE AND BACK DOORS. OWNER TO APPROVE LOCATIONS PRIOR TO CONSTRUCTION.
6. HOLLOW METAL DOOR AND FRAME. REFER SPECIFICATION FOR ALTERNATE.
7. FIRE RISER ROOM. RE: PLUMBING DRAWINGS.
8. ROOF ACCESS LADDER. RE: SHEET A3.5. VERIFY LOCATION W/OWNER.
9. LINE OF AWNING ABOVE (DASHED).
10. AT ALL DOORS, LANDINGS SHALL HAVE A WIDTH NOT LESS THAN THE WIDTH OF THE DOOR. DOORS IN THE FULLY OPEN POSITION SHALL NOT REDUCE A REQUIRED DIMENSION BY MORE THAN 7 INCHES. WHEN A LANDING SERVES AN OCCUPANT LOAD OF 50 OR MORE, DOORS IN ANY POSITION SHALL NOT REDUCE THE LANDING TO LESS THAN ONE–HALF ITS REQUIRED WIDTH. LANDINGS SHALL HAVE A LENGTH MEASURED IN THE DIRECTION OF TRAVEL OF NOT LESS THAN 44 INCHES. CONCRETE LANDING LEVEL OUTSIDE OF ENTRY TO BE FLUSH W/ FINISH FLOOR. HARDWARE NOTES: HANDLES, PULLS, LATCHES, LOCKS AND OTHER OPERATING DEVICES SHALL HAVE A SHAPE THAT IS EASY TO GRASP WITH ONE HAND AND DOES NOT REQUIRE TIGHT GRASPING, TIGHT PINCHING OR TWISTING OF THE WRIST TO OPERATE. 3'–0" X 7'–0" ALUMINUM AND GLASS FRAMED DOOR. EXACT LOCATION AND QUANTITY OF ALL DOORS AS DIRECTED BY OWNER.
11. CLASS ABC FIRE EXTINGUISHERS. NUMBER & LOCATION PER FIRE DEPARTMENT REQUIREMENTS.
12. NOT USED.
13. CONTRACTOR SHALL FURNISH AND INSTALL A MULTI–TENANT MAILBOX W/ KEYS (8 UNIT + PARCEL). REFER SPECIFICATIONS FOR ADDITIONAL INFORMATION. GENERAL CONTRACTOR SHALL COORDINATE INSTALLATION LOCATION AND SIZE WITH LOCAL US POSTAL SERVICE AND LANDLORD PRIOR TO PURCHASE.
14. ACCESSIBLE PARKING SIGN. RE: 4/AS1.0.
15. CURB RAMP. RE: 13&14/AS1.1.
16. CONC SIDEWALK. REFER SHEET AS1.1 FOR DETAILS.
17. ELECTRICAL SERVICE. RE: ELECTRICAL DRAWINGS. VERIFY SERVICE LOCATIONS W/ OWNER.
18. NOT USED.
19. LANDSCAPE AREA & TRELLIS. REFER LANDSCAPE AND IRRIGATION DRAWINGS.
20. KNOX BOX PER FIRE MARSHALL APPROVED LOCATION. (2) AS DIRECTED BY FIRE MARSHALL.
21. BIKE RACK. REFER SHEET AS1.0.

(01) DENOTES DOOR TYPE. REFER THIS SHEET FOR ADDITIONAL INFORMATION.

GENERAL NOTES:

A. REFER CIVIL DRAWINGS FOR DIMENSIONAL CONTROL PLAN.
B. REFER SHEET A1.2 FOR SOFFIT PLAN.
C. REFER SHEET A1.3 & A1.4 FOR ROOF PLAN.
D. REFER SHEET A1.5 FOR SIDEWALK PLAN.
E. PRIOR TO CONSTRUCTION, COORDINATE FINAL NUMBER AND LOCATION OF STOREFRONT ENTRY DOORS, REAR DOORS, ROOF LADDER, ELECTRICAL SERVICE AND DOWNSPOUTS W/ OWNER.
F. GENERAL CONTRACTOR IS RESPONSIBLE FOR COMPLETE INSTALLATION OF CANOPIES AND AWNINGS, INCLUDING SUPPORT, BLOCKING AND FLASHING.
G. ALL EXTERIOR WALLS OF LEASE SPACE SHALL HAVE 3 5/8" 25 GA MTL STUD FRAMING @ 24" O.C. W/ R–15 BATT INSULATION FULL HEIGHT.

OSBORN & VANE ARCHITECTS, inc

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SHELL BUILDING & SITE WORK DEVELOPMENT

720/722 US 79 WEST TOWNWEST COMMONS
HUTTO, TX 78634

Project No. 18064
Drawn
Checked

FLOOR PLAN BUILDING A

Sheet No. A1.0

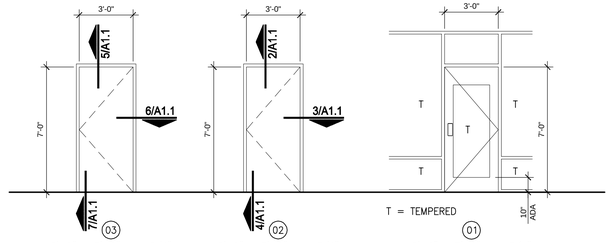
HARDWARE SET 1 (ENTRY)		
1	EA	DEAD BOLT W/ THUMBTURN
1	EA	EXIT INDICATOR
BALANCE OF DOOR HARDWARE BY DOOR SUPPLIER		

HARDWARE SET 2 (REAR DOOR)		
3	EA	HINGE
1	EA	DEAD BOLT W/ THUMB TURN
1	EA	CLOSER
1	EA	DOOR STOP
1	EA	DOOR SWEEP
1	EA	THRESHOLD
1	EA	WEATHER STRIPPING
1	EA	RAIN DRIP
1	EA	OFFSET LATCH GUARD

HARDWARE SET 3 (RISER ROOMS		
3	EA	HINGE
1	EA	KEYPAD LOCK SET (*) (1)
1	EA	CLOSER
1	EA	DOOR STOP–WALL MOUNT
1	EA	DOOR SWEEP
1	EA	THRESHOLD
1	EA	WEATHER STRIPPING
1	EA	RAIN DRIP
1	EA	OFFSET LATCH GUARD

(1)

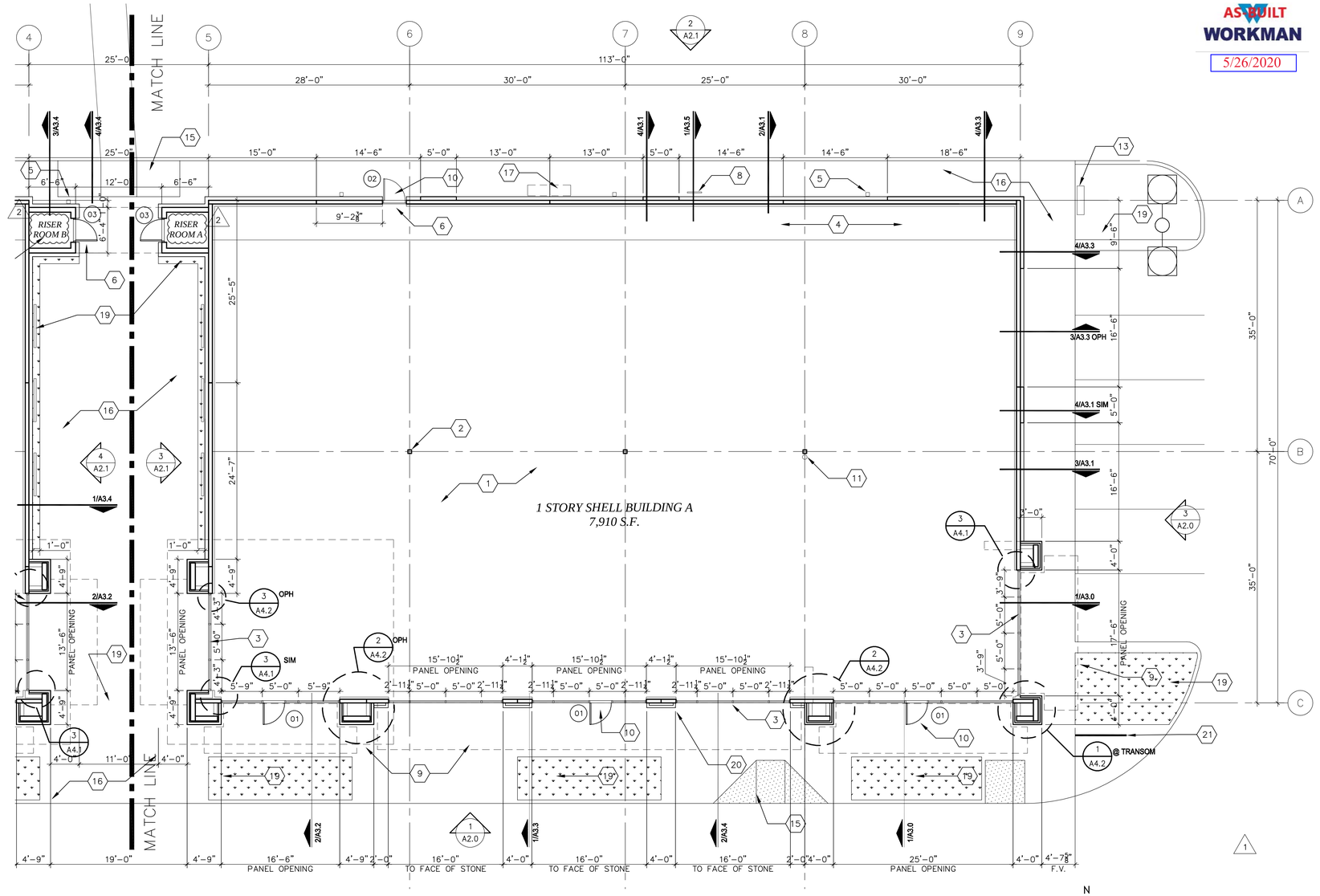
KEYPAD LOCK SET (*) – MODEL, IQ1LITE, MFR, MARKS USA. FINISH, 19 BLACK POWDER COAT.



2 DOOR & HARDWARE SCHEDULE

1/4"= 1'-0"

AS BUILT
WORKMAN
5/26/2020



1 FLOOR PLAN BUILDING A

1/8"= 1'-0"

N

0 4' 8' 16' 24'

Date issued/revised

14 SEP 2018 FOR PERMIT & REVIEW
14 NOV 2018 FOR PRICING (1)
15 MAR 2019 FOR PERMIT (1)
14 MAY 2019 BLDG PERMIT RESPONSE (2)
2 JUL 2019 FOR CONSTRUCTION

NOTES TO SHEET A1.0 & A1.1:

1. REFER CIVIL DWGS FOR F.F. ELEVATION.
2. STEEL COLUMN. RE: STRUC DWGS.
3. SCHEDULED ALUMINUM & GLASS STOREFRONT. RE: EXTERIOR FINISH SCHEDULE
4. 5 FOOT SLAB LEAVE OUT. RE: STRUC DWGS.
5. 6"X6" PREFINISHED MTL DOWNSPOUT. TIE INTO STORM LINE. RE: CIVIL DWG. COORDINATE FINAL LOCATIONS W/ ELECTRICAL SERVICE AND BACK DOORS. OWNER TO APPROVE LOCATIONS PRIOR TO CONSTRUCTION.
6. HOLLOW METAL DOOR AND FRAME. REFER SPECIFICATION FOR ALTERNATE.
7. FIRE RISER ROOM. RE: PLUMBING DRAWINGS.
8. ROOF ACCESS LADDER. RE: SHEET A3.5. VERIFY LOCATION W/OWNER.
9. LINE OF AWNING ABOVE (DASHED).
10. AT ALL DOORS, LANDINGS SHALL HAVE A WIDTH NOT LESS THAN THE WIDTH OF THE DOOR. DOORS IN THE FULLY OPEN POSITION SHALL NOT REDUCE A REQUIRED DIMENSION BY MORE THAN 7 INCHES. WHEN A LANDING SERVES AN OCCUPANT LOAD OF 50 OR MORE, DOORS IN ANY POSITION SHALL NOT REDUCE THE LANDING TO LESS THAN ONE–HALF ITS REQUIRED WIDTH. LANDINGS SHALL HAVE A LENGTH MEASURED IN THE DIRECTION OF TRAVEL OF NOT LESS THAN 44 INCHES. CONCRETE LANDING LEVEL OUTSIDE OF ENTRY TO BE FLUSH W/ FINISH FLOOR. HARDWARE NOTES: HANDLES, PULLS, LATCHES, LOCKS AND OTHER OPERATING DEVICES SHALL HAVE A SHAPE THAT IS EASY TO GRASP WITH ONE HAND AND DOES NOT REQUIRE TIGHT GRASPING, TIGHT PINCHING OR TWISTING OF THE WRIST TO OPERATE. 3'–0" X 7'–0" ALUMINUM AND GLASS FRAMED DOOR. EXACT LOCATION AND QUANTITY OF ALL DOORS AS DIRECTED BY OWNER.
11. CLASS ABC FIRE EXTINGUISHERS. NUMBER & LOCATION PER FIRE DEPARTMENT REQUIREMENTS.
12. NOT USED.
13. CONTRACTOR SHALL FURNISH AND INSTALL A MULTI–TENANT MAILBOX W/ KEYS (8 UNIT + PARCEL). REFER SPECIFICATIONS FOR ADDITIONAL INFORMATION. GENERAL CONTRACTOR SHALL COORDINATE INSTALLATION LOCATION AND SIZE WITH LOCAL US POSTAL SERVICE AND LANDLORD PRIOR TO PURCHASE.
14. ACCESSIBLE PARKING SIGN. RE: 4/AS1.0.
15. CURB RAMP. RE: 13&14/AS1.1.
16. CONC SIDEWALK. REFER SHEET AS1.1 FOR DETAILS.
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18. NOT USED.
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21. BIKE RACK. REFER SHEET AS1.0.

(01) DENOTES DOOR TYPE. REFER THIS SHEET FOR ADDITIONAL INFORMATION.

GENERAL NOTES:

A. REFER CIVIL DRAWINGS FOR DIMENSIONAL CONTROL PLAN.
B. REFER SHEET A1.2 FOR SOFFIT PLAN.
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F. GENERAL CONTRACTOR IS RESPONSIBLE FOR COMPLETE INSTALLATION OF CANOPIES AND AWNINGS, INCLUDING SUPPORT, BLOCKING AND FLASHING.
G. ALL EXTERIOR WALLS OF LEASE SPACE SHALL HAVE 3 5/8" 25 GA MTL STUD FRAMING @ 24" O.C. W/ R–15 BATT INSULATION FULL HEIGHT.

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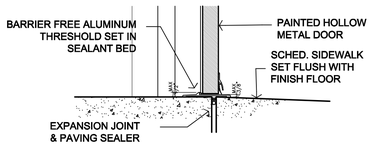
SHELL BUILDING & SITE WORK DEVELOPMENT

720/722 US 79 WEST TOWNWEST COMMONS
HUTTO, TX 78634

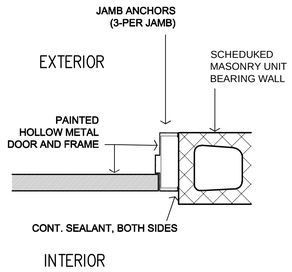
Project No. 18064
Drawn
Checked

FLOOR PLAN BUILDING A

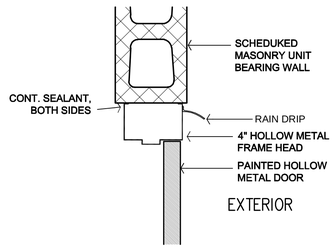
Sheet No. A1.0



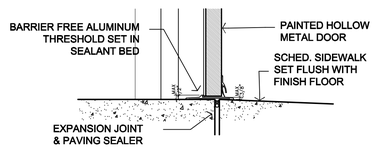
7 DOOR DETAIL
1 1/2"= 1'-0"



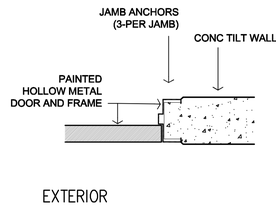
6 DOOR DETAIL
1 1/2"= 1'-0"



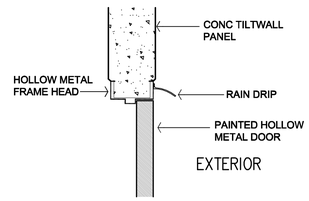
5 DOOR DETAIL
1 1/2"= 1'-0"



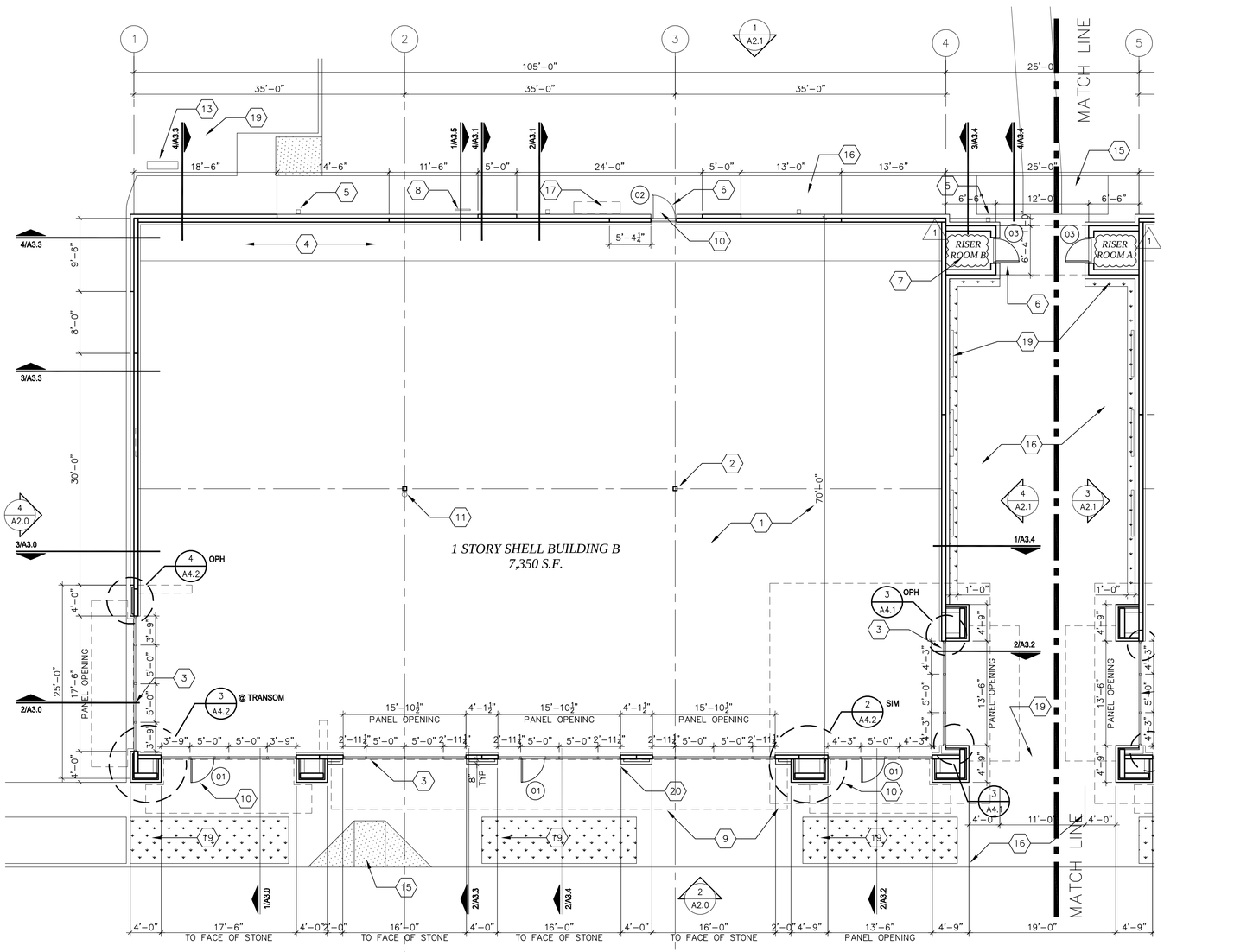
4 DOOR DETAIL
1 1/2"= 1'-0"



3 DOOR DETAIL
1 1/2"= 1'-0"



2 DOOR DETAIL
1 1/2"= 1'-0"



1 FLOOR PLAN BUILDING B
1/8"= 1'-0"

N
0 4' 8' 16' 24'

AS BUILT
WORKMAN
5/26/2020

Date issued/revised

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14 NOV 2019 FOR PRICING
15 MAR 2019 FOR PERMIT
14 MAY 2019 BLDG PERMIT RESPONSE 1
2 JUL 2019 FOR CONSTRUCTION

NOTES TO SHEET A1.0 & A1.1:

1. REFER CIVIL DWGS FOR F.F. ELEVATION.
2. STEEL COLUMN. RE: STRUC DWGS.
3. SCHEDULED ALUMINUM & GLASS STOREFRONT. RE: EXTERIOR FINISH SCHEDULE
4. 5 FOOT SLAB LEAVE OUT. RE: STRUC DWGS.
5. 6"X6" PREFINISHED MTL DOWNSPOUT. TIE INTO STORM LINE. RE: CIVIL DWG. COORDINATE FINAL LOCATIONS W/ ELECTRICAL SERVICE AND BACK DOORS. OWNER TO APPROVE LOCATIONS PRIOR TO CONSTRUCTION.
6. HOLLOW METAL DOOR AND FRAME. REFER SPECIFICATION FOR ALTERNATE.
7. FIRE RISER ROOM. RE: PLUMBING DRAWINGS.
8. ROOF ACCESS LADDER. RE: SHEET A3.5. VERIFY LOCATION W/OWNER.
9. LINE OF AWNING ABOVE (DASHED).
10. AT ALL DOORS, LANDINGS SHALL HAVE A WIDTH NOT LESS THAN THE WIDTH OF THE DOOR. DOORS IN THE FULLY OPEN POSITION SHALL NOT REDUCE A REQUIRED DIMENSION BY MORE THAN 7 INCHES. WHEN A LANDING SERVES AN OCCUPANT LOAD OF 50 OR MORE, DOORS IN ANY POSITION SHALL NOT REDUCE THE LANDING TO LESS THAN ONE-HALF ITS REQUIRED WIDTH. LANDINGS SHALL HAVE A LENGTH MEASURED IN THE DIRECTION OF TRAVEL OF NOT LESS THAN 44 INCHES. CONCRETE LANDING LEVEL OUTSIDE OF ENTRY TO BE FLUSH W/ FINISH FLOOR. HARDWARE NOTES: HANDLES, PULLS, LATCHES, LOCKS AND OTHER OPERATING DEVICES SHALL HAVE A SHAPE THAT IS EASY TO GRASP WITH ONE HAND AND DOES NOT REQUIRE TIGHT GRASPING, TIGHT PINCHING OR TWISTING OF THE WRIST TO OPERATE. 3'-0" X 7'-0" ALUMINUM AND GLASS FRAMED DOOR. EXACT LOCATION AND QUANTITY OF ALL DOORS AS DIRECTED BY OWNER.
11. CLASS ABC FIRE EXTINGUISHERS. NUMBER & LOCATION PER FIRE DEPARTMENT REQUIREMENTS.
12. NOT USED.
13. CONTRACTOR SHALL FURNISH AND INSTALL A MULTI-TENANT MAILBOX W/ KEYS (8 UNIT + PARCEL). REFER SPECIFICATIONS FOR ADDITIONAL INFORMATION. GENERAL CONTRACTOR SHALL COORDINATE INSTALLATION LOCATION AND SIZE WITH LOCAL US POSTAL SERVICE AND LANDLORD PRIOR TO PURCHASE.
14. ACCESSIBLE PARKING SIGN. RE: 4/AS1.0.
15. CURB RAMP. RE: 13&14/AS1.1.
16. CONC SIDEWALK. REFER SHEET AS1.1 FOR DETAILS.
17. ELECTRICAL SERVICE. RE: ELECTRICAL DRAWINGS. VERIFY SERVICE LOCATIONS W/ OWNER.
18. NOT USED.
19. LANDSCAPE AREA & TRELLIS. REFER LANDSCAPE AND IRRIGATION DRAWINGS.
20. KNOX BOX PER FIRE MARSHALL APPROVED LOCATION. (2) AS DIRECTED BY FIRE MARSHALL.
21. BIKE RACK. REFER SHEET AS1.0.

01 DENOTES DOOR TYPE. REFER THIS SHEET FOR ADDITIONAL INFORMATION.

GENERAL NOTES:

A. REFER CIVIL DRAWINGS FOR DIMENSIONAL CONTROL PLAN.
B. REFER SHEET A1.2 FOR SOFFIT PLAN.
C. REFER SHEET A1.3 & A1.4 FOR ROOF PLAN.
D. REFER SHEET A1.5 FOR SIDEWALK PLAN.
E. PRIOR TO CONSTRUCTION, COORDINATE FINAL NUMBER AND LOCATION OF STOREFRONT ENTRY DOORS, REAR DOORS, ROOF LADDER, ELECTRICAL SERVICE AND DOWNSPOUTS W/ OWNER.
F. GENERAL CONTRACTOR IS RESPONSIBLE FOR COMPLETE INSTALLATION OF CANOPIES AND AWNINGS, INCLUDING SUPPORT, BLOCKING AND FLASHING.
G. ALL EXTERIOR WALLS OF LEASE SPACE SHALL HAVE 3 5/8" 25 GA MTL STUD FRAMING @ 24" O.C. W/ R-15 BATT INSULATION FULL HEIGHT.

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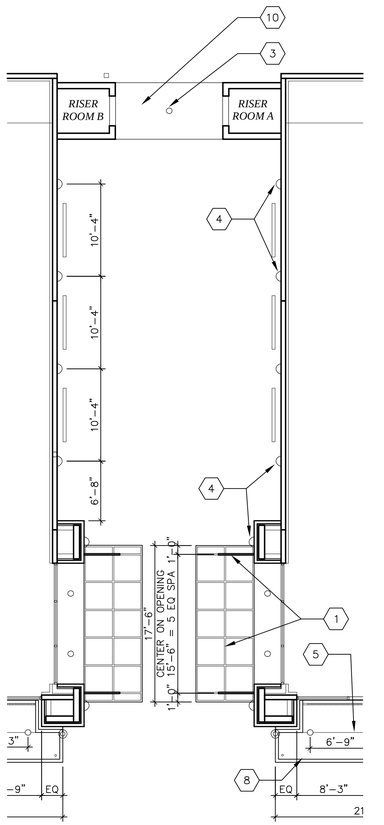
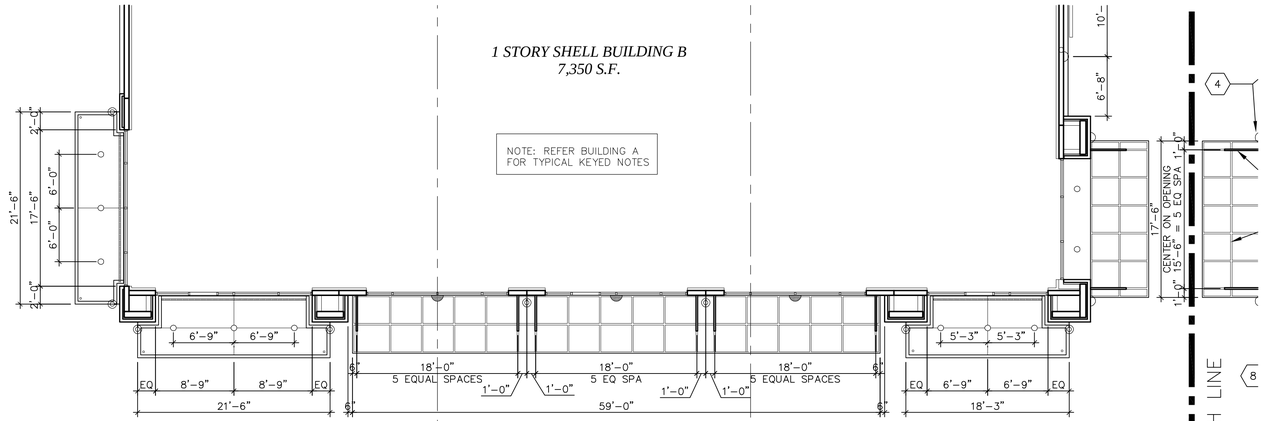
FLOOR PLAN BUILDING B

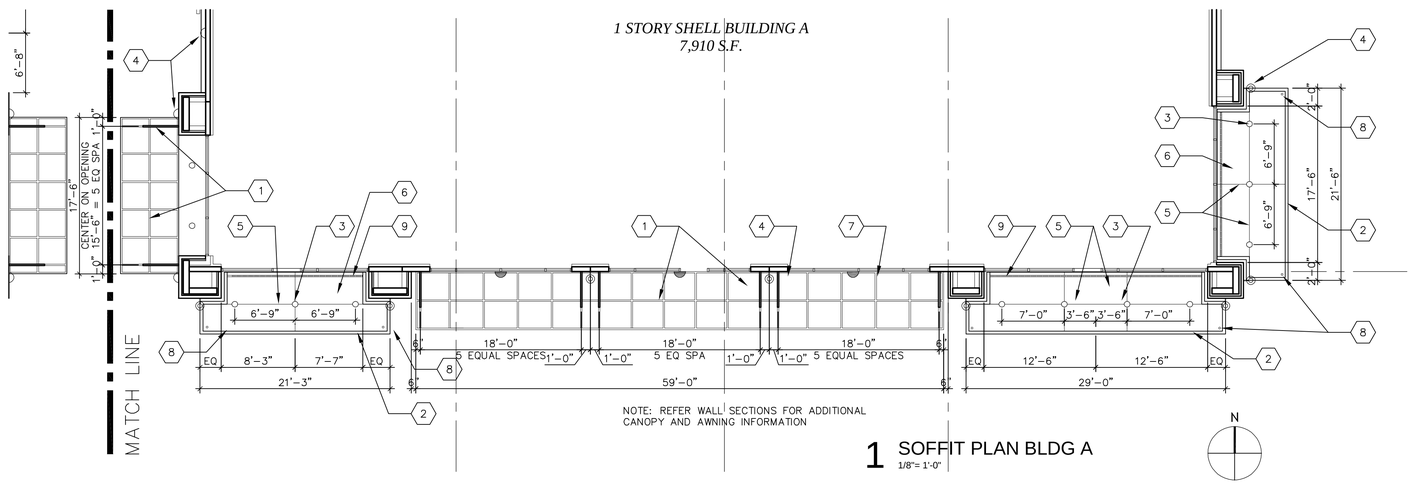
Sheet No. A1.1



3 SOFFIT PLAN @ PATIO
1/8"= 1'-0"



2 SOFFIT PLAN BLDG B
1/8"= 1'-0"



1 SOFFIT PLAN BLDG A
1/8"= 1'-0"

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NOTES TO SHEET

1. PREFINISHED METAL AWNING ON PAINTED STEEL TUBE FRAME. PAINT UNDERSIDE OF ROOF PANELS TO MATCH STEEL FRAME. NO EXPOSED FASTENERS.
2. STEEL CANOPY W/ ANODIZED ALUMINUM FASCIA.
3. RECESSED DOWN LIGHT, RE: ELECT. DRAWINGS. COORDINATE INSTALLATION WITH CANOPY FRAMING PRIOR TO CONSTRUCTION.
4. WALL MOUNTED SCONCE, RE: ELECT. DRAWINGS.
5. #15 ZINC DOUBLE VEE CONTROL JOINT IN E.I.F.S. SOFFIT.
6. E.I.F.S. BASE AND FINISH COAT APPLIED DIRECTLY TO 1/2" DENSGLAS SOFFIT.
7. WALL MOUNTED LIGHT FIXTURE, RE: ELECTRICAL DRAWINGS.
8. 3"ø DOWNSPOUT IN FORMED GUTTER. DRAIN THRU CANOPY.

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5/26/2020

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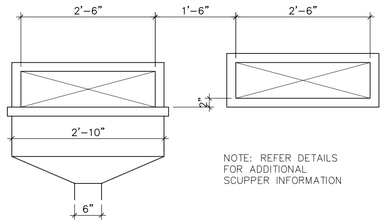
SOFFIT PLANS

Sheet No. A1.2



3 TYPICAL SCUPPER ELEVATION
3/4"= 1'-0"

#18064 SCUPPER AND DOWNSPOUT SIZING (INTENSITY BASED ON SMACNA 10 YEAR STORM)

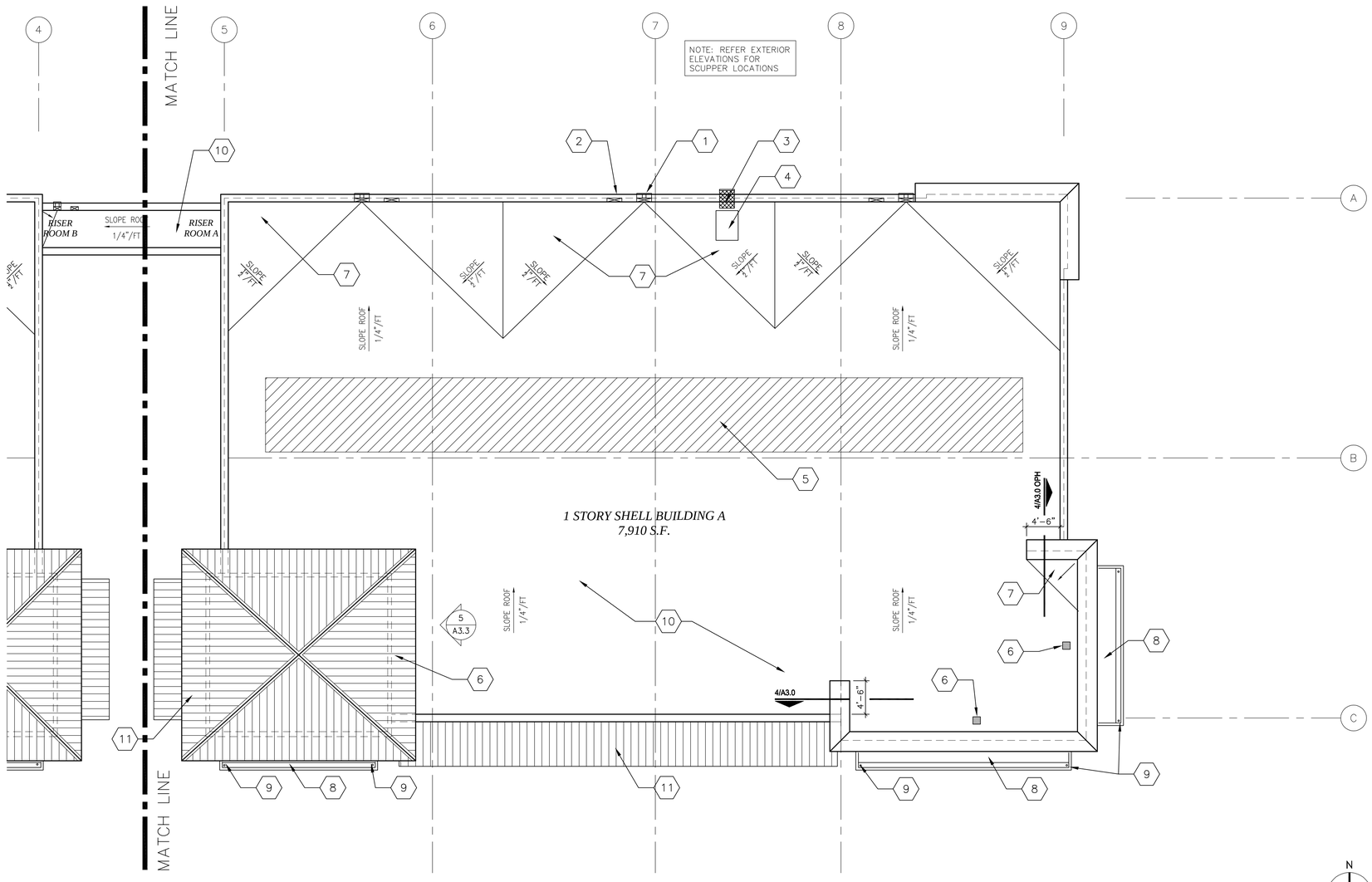
ROOF AREA: 7,910 S.F.
RAINFALL INTENSITY: 8.2 IN/HR

SCUPPER SIZING:
SMACNA TABLE 1-2, storms which should be exceeded only once in 10 years
(SMACNA table 1-2, rainfall data)
RAINFALL INTENSITY IN GPM: GPM = (0.0104) x (IPH) x (ROOF AREA)
GPM = 0.0104 x 8.2 x 7,910 = 675 GPM–S.F. (entire roof)
HEAD HEIGHT IN INCHES: 2" (assumed)
determine head height: in inches of water at a point 6 ft back from scupper
SCUPPER CAPACITY: INTENSITY (GPM)/TOTAL NUMBER OF PROPOSED SCUPPERS 675 GPM/3 SCUPPERS = 225 GPM
FROM TABLE G–1: AT 3 PROPOSED SCUPPERS AND 2" HEAD EACH SCUPPER MUST BE 30" WIDE (TABLE G–1)
SCUPPER TOTAL: 3 SCUPPERS @ 30" WIDE

DOWNSPOUT SIZING:
SMACNA TABLE 1-2, storms which should be exceeded only once in 10 years
RAINFALL INTENSITY IN IN/HR: 8.2 IN/HR
CALCULATED ROOF AREA DRAINED PER DOWNSPOUT AREA: 150 S.F./S.I.
7,910 S.F./150 S.F./S.I. = 53 S.I. TOTAL DOWNSPOUT AREA. REQUIRED SIZE @ 3 DOWNSPOUTS 53/3 = 18 S.I.
(ASSUME 6"x6" SQUARE DOWNSPOUT = 36 S.I. EACH = 108 S.I. > 18 S.I.

NOTE: EMERGENCY OVERFLOW SYSTEM TO EQUAL REGULAR SYSTEM @ +2" ABOVE REGULAR SCUPPER

2 SCUPPER SIZING BUILDING A
NO SCALE



1 ROOF PLAN BUILDING A
1/8"= 1'-0"

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14 NOV 2018 FOR PRICING
15 MAR 2019 FOR PERMIT
2 JUL 2019 FOR CONSTRUCTION

KEY NOTES TO SHEET:

1. ROOF SCUPPER AND DOWNSPOUTS.
2. OVERFLOW SCUPPER TO MATCH REGULAR SCUPPER.
3. ROOF LADDER AND PLATFORM. RE: 3&4/A3.4.
4. 30" SQUARE min. FLEXIBLE PLASTIC WALK PAD (5/16" thk. min.)
5. RTU ZONE. REFER STRUC DWGS FOR ADDITIONAL INFORMATION.
6. PORTALS PLUS 5 HOLE PIPE PORTAL FLASHING SYSTEM, #29430.
7. MTL ROOF OF RISER ROOM BELOW.
8. CANOPY BELOW W/ TPO ROOFING. PROVIDE ALL SUPPORT, BLOCKING AND FLASHING FOR A COMPLETE INSTALLATION.
9. 3"ø DOWNSPOUT IN FORMED GUTTER. DRAIN THRU CANOPY.
10. SCHEDULED ROOF ON RIGID INSULATION ON METAL DECK.
11. AWNING W/ STANDING SEAM ROOF ON PAINTED METAL FRAME.
12. PREFINISHED STANDING SEAM MTL ROOF ON 5/8" FIRE RETARDANT TREATED PLYWOOD DECK ON METAL ENGINEERED TRUSS SYSTEM. REFER STRUC DWGS FOR ADDITIONAL INFORMATION.

AS BUILT
WORKMAN
5/26/2020

ROOFING GENERAL NOTES:

A. MAIN ROOF SHALL BE MODIFIED BITUMINOUS ROOFING OVER POLYISOCYANURATE INSULATION. CAP SHEET SHALL MEET THE FOLLOWING COOL ROOF REQUIREMENTS.
A.1. 3 YEAR AGED SOLAR REFLECTANCE >=0.55 AS TESTED PER ONE OF THE FOLLOWING: ASTM C1549, ASTM E903, ASTM E1175, or ASTM E1918.
A.2. 3 YEAR AGED THERMAL EMITTANCE >=0.75 AS TESTED PER ONE OF THE FOLLOWING: ASTM C835, ASTM C1371, or ASTM E408 REFER SPECIFICATIONS FOR ADDITIONAL INFORMATION.
B. ROOF INSULATION SHALL BE A MINIMUM OF R–25.
C. HORIZONTAL CANOPIES ARE 60 MIL TPO ROOFING MEMBRANE.

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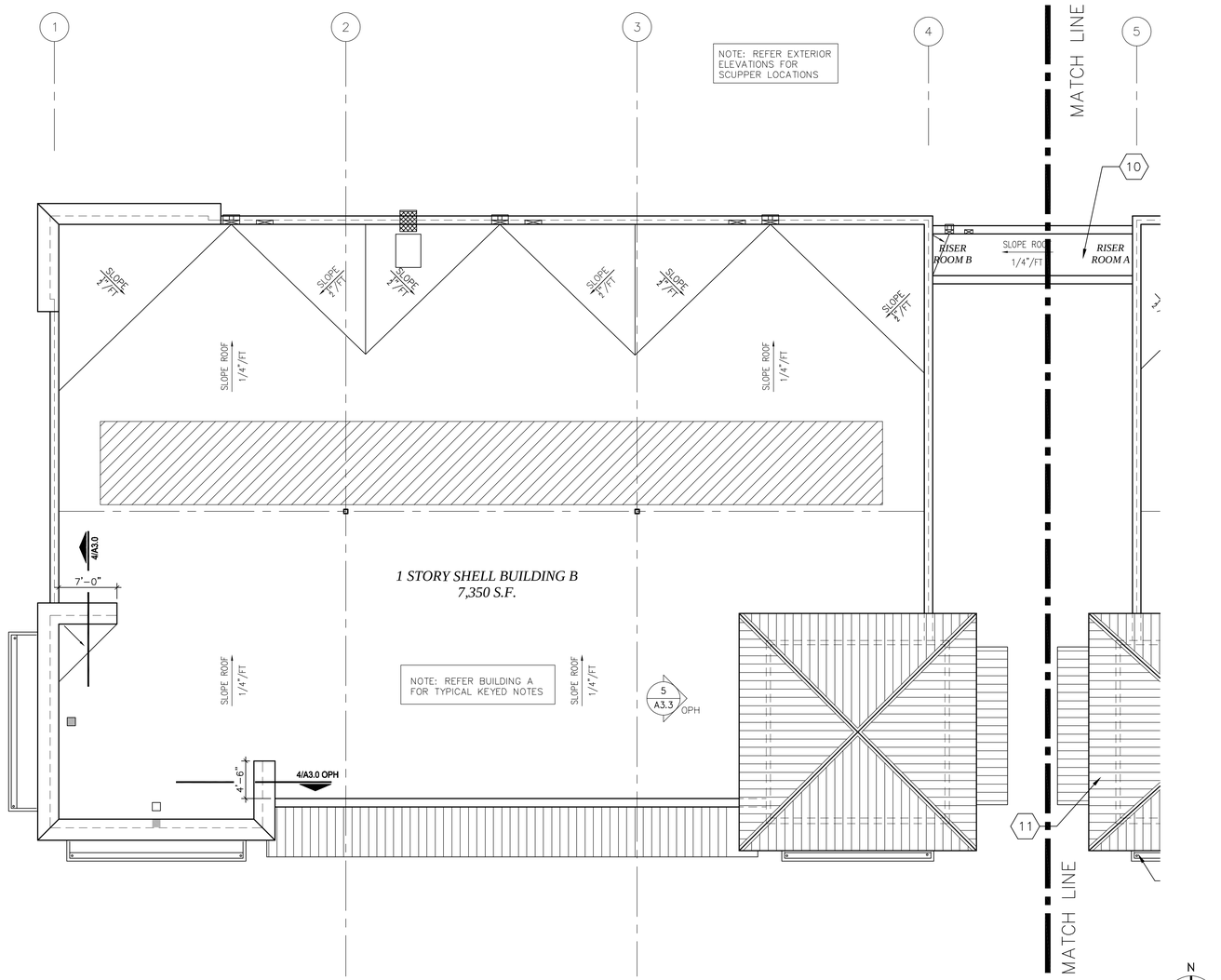
ROOF PLAN BUILDING A

Sheet No. A1.3

#18064 SCUPPER AND DOWNSPOUT SIZING (INTENSITY BASED ON SMACNA 10 YEAR STORM)	
ROOF AREA:	7,350 S.F.
RAINFALL INTENSITY:	8.2 IN/HR
SCUPPER SIZING:	
SMACNA TABLE 1-2, storms which should be exceeded only once in 10 years (SMACNA table 1-2, rainfall data)	
RAINFALL INTENSITY IN GPM:	GPM = (0.0104) x (IPH) x (ROOF AREA)
	GPM = 0.0104 x 8.2 x 7,350 = 627 GPM–S.F. (entire roof)
HEAD HEIGHT IN INCHES:	2" (assumed)
determine head height: in inches of water at a point 6 ft back from scupper	
SCUPPER CAPACITY:	INTENSITY (GPM)/TOTAL NUMBER OF PROPOSED SCUPPERS 627 GPM/3 SCUPPERS = 209 GPM
FROM TABLE G–1:	AT 3 PROPOSED SCUPPERS AND 2" HEAD EACH SCUPPER MUST BE 30" WIDE (TABLE G–1)
SCUPPER TOTAL:	3 SCUPPERS @ 30" WIDE
DOWNSPOUT SIZING:	
SMACNA TABLE 1-2, storms which should be exceeded only once in 10 years	
RAINFALL INTENSITY IN IN/HR: 8.2 IN/HR	
CALCULATED ROOF AREA DRAINED PER DOWNSPOUT AREA: 150 S.F./S.I.	
7,350 S.F./150 S.F./S.I. = 49 S.I. TOTAL DOWNSPOUT AREA. REQUIRED SIZE @ 3 DOWNSPOUTS 43/3 = 15 S.I.	
(ASSUME 6"x6" SQUARE DOWNSPOUT = 36 S.I. EACH = 108 S.I. > 15 S.I.	
NOTE: EMERGENCY OVERFLOW SYSTEM TO EQUAL REGULAR SYSTEM @ +2" ABOVE REGULAR SCUPPER	

2 SCUPPER SIZING BUILDING B
NO SCALE



1 ROOF PLAN BUILDING B
1/8"= 1'-0"

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14 NOV 2018 FOR PRICING
15 MAR 2019 FOR PERMIT
2 JUL 2019 FOR CONSTRUCTION

KEY NOTES TO SHEET:

1. ROOF SCUPPER AND DOWNSPOUTS.
2. OVERFLOW SCUPPER TO MATCH REGULAR SCUPPER.
3. ROOF LADDER AND PLATFORM. RE: 3&4/A3.4.
4. 30" SQUARE min. FLEXIBLE PLASTIC WALK PAD (5/16" thk. min.)
5. RTU ZONE. REFER STRUC DWGS FOR ADDITIONAL INFORMATION.
6. PORTALS PLUS 5 HOLE PIPE PORTAL FLASHING SYSTEM, #29430.
7. MTL ROOF OF RISER ROOM BELOW.
8. CANOPY BELOW W/ TPO ROOFING. PROVIDE ALL SUPPORT, BLOCKING AND FLASHING FOR A COMPLETE INSTALLATION.
9. 3"ø DOWNSPOUT IN FORMED GUTTER. DRAIN THRU CANOPY.
10. SCHEDULED ROOF ON RIGID INSULATION ON METAL DECK.
11. AWNING W/ STANDING SEAM ROOF ON PAINTED METAL FRAME.
12. PREFINISHED STANDING SEAM MTL ROOF ON ¾" FIRE RETARDANT TREATED PLYWOOD DECK ON METAL ENGINEERED TRUSS SYSTEM. REFER STRUC DWGS FOR ADDITIONAL INFORMATION.

ROOFING GENERAL NOTES:

A. MAIN ROOF SHALL BE MODIFIED BITUMINOUS ROOFING OVER POLYISOCYANURATE INSULATION. CAP SHEET SHALL MEET THE FOLLOWING COOL ROOF REQUIREMENTS.
A.1. 3 YEAR AGED SOLAR REFLECTANCE >=0.55 AS TESTED PER ONE OF THE FOLLOWING: ASTM C1549, ASTM E903, ASTM E1175, or ASTM E1918.
A.2. 3 YEAR AGED THERMAL EMITTANCE >=0.75 AS TESTED PER ONE OF THE FOLLOWING: ASTM C835, ASTM C1371, or ASTM E408 REFER SPECIFICATIONS FOR ADDITIONAL INFORMATION.
B. ROOF INSULATION SHALL BE A MINIMUM OF R–25.
C. HORIZONTAL CANOPIES ARE 60 MIL TPO ROOFING MEMBRANE.

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ROOF PLAN BUILDING B

Sheet No. A1.4

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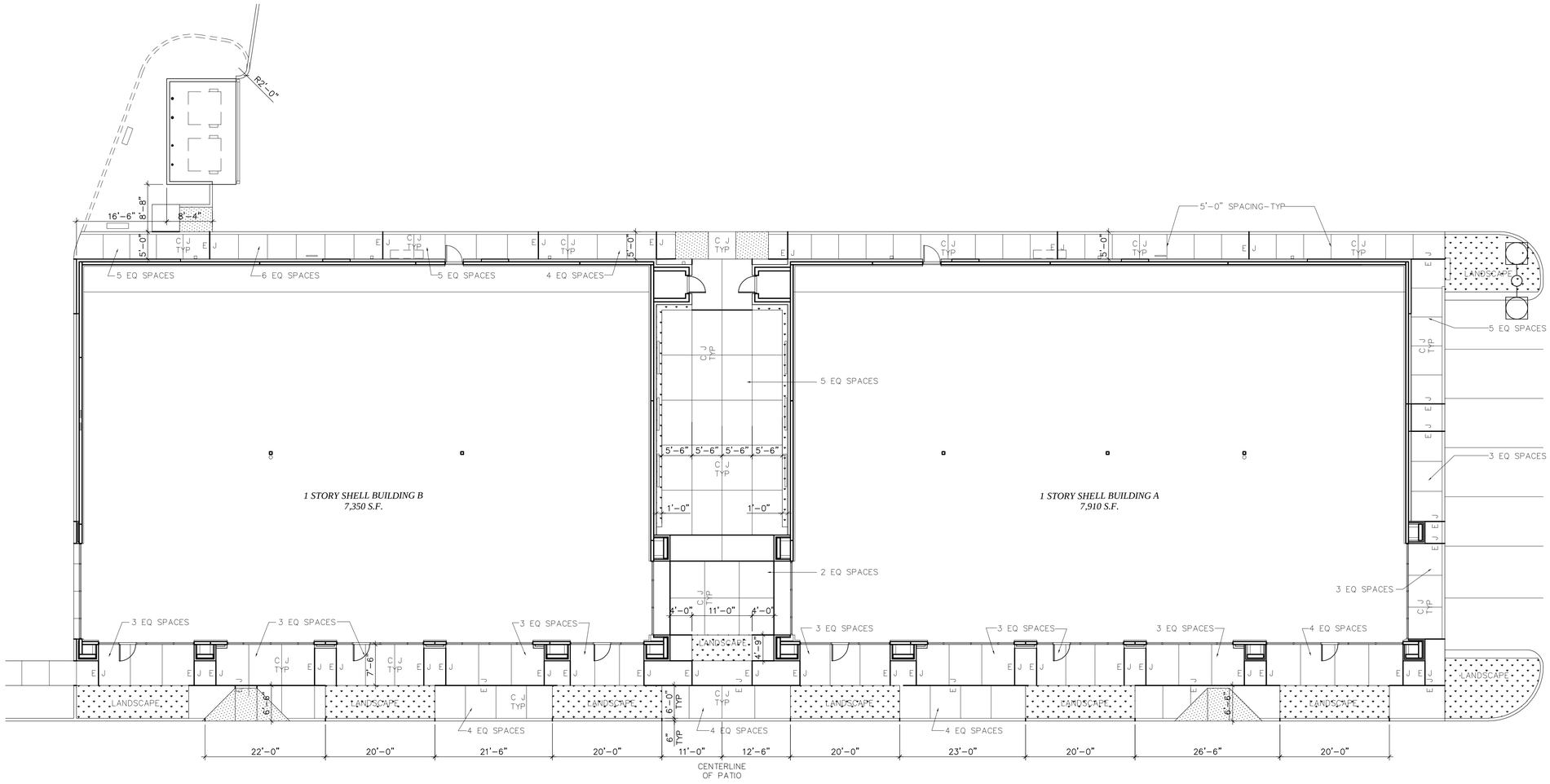
5/26/2020



1 SIDEWALK PLAN
3/32"= 1'-0"

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WORKMAN
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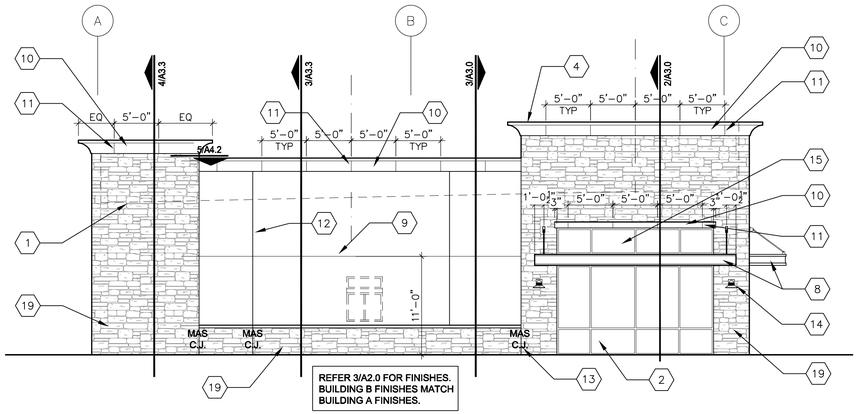
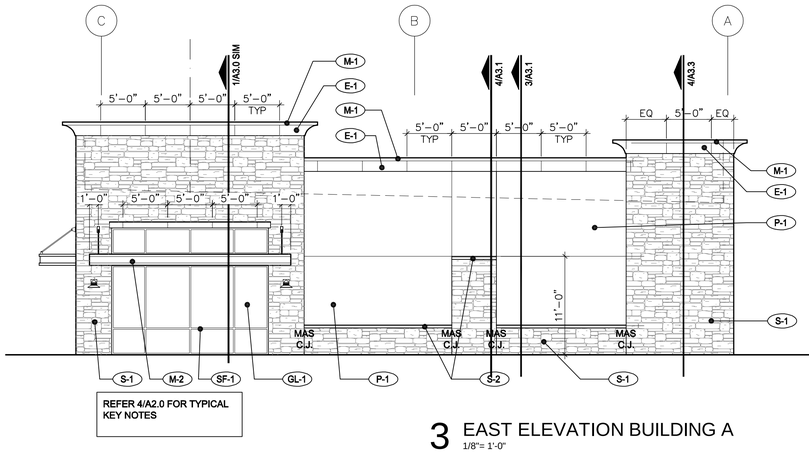
SIDEWALK PLAN

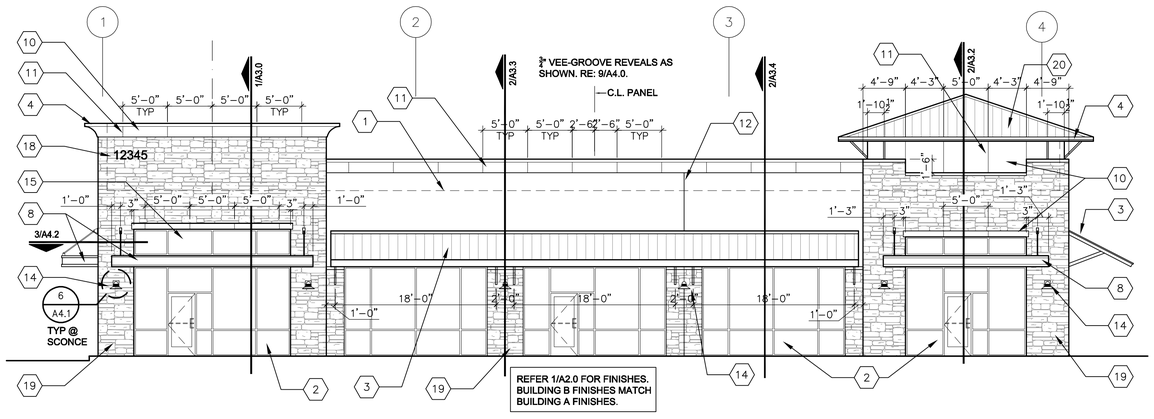
Sheet No. A1.5



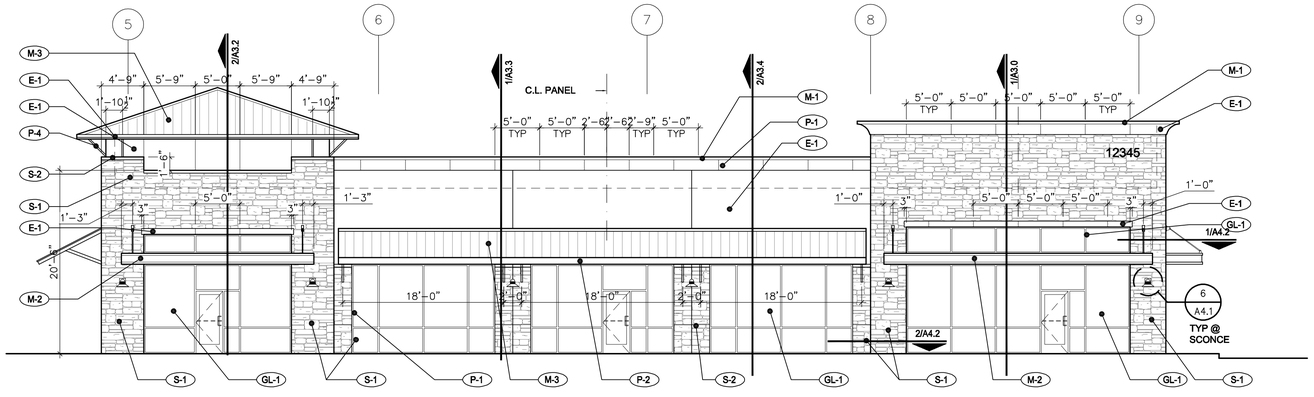
4 WEST ELEVATION BUILDING B
1/8"= 1'-0"



3 EAST ELEVATION BUILDING A
1/8"= 1'-0"



2 SOUTH ELEVATION BUILDING B
1/8"= 1'-0"



1 SOUTH ELEVATION BUILDING A
1/8"= 1'-0"

0 4' 8' 16' 24'

EXTERIOR FINISH SCHEDULE

KEY	MATERIAL	DESCRIPTION/MFR	COLOR NUMBER/NAME	NOTES
S-1	STONE VENEER	ALAMO STONE-FULL STONE, CHOP/ASHLER STONE PATTERN	ALAMO CREAM	3,5
S-2	CAST STONE	SITEWORKS	CREAM	1,3
MRT	MORTAR	AMERIMIX COLORED MORTAR MIX	LIGHT TAN	3
E-1	EIFS CORNICE & TRIM	EIFS FINISH COAT ACCENT COLOR	MATCH SW 6105 DIVINE WHITE	5
P-1	TEXTURED COATING	EIFS TEXTURED COATING ON FACE OF TILTWALL	SW 6093 FAMILIAR BEIGE	4
P-2	PAINT	STEEL AWNING FRAMES & PANEL BOTTOMS	SW 6002 ESSENTIAL GREY	-
P-3	PAINT	DOORS, FRAMS, MISC METALS & EQUIPMENT	SW 6093 FAMILIAR BEIGE	-
M-1	PREFINISHED METAL	CAP FLASHING @ PARAPET-BERRIDGE	ALMOND	-
M-2	PREFINISHED METAL	CANOPY FASCIA COVER-BERRIDGE	ACRYLIC-COATED GALVALUME	2
M-3	STANDING SEAM ROOF	SLOPED ROOF/AWNINGS-BERRIDGE	ACRYLIC-COATED GALVALUME	2
M-4	PREFINISHED MTL SHAPES	SCUPPERS, DOWNSPOUTS, MISC TRIM-BERRIDGE	ALMOND	-
SF-1	ALUMINUM STOREFRONT	REFER SPECIFICATIONS	CLEAR ANODIZED	-
GL-1	STOREFRONT GLASS	PPG SOLARBAN 70XL LOW-E	CLEAR/CLEAR	-

GENERAL NOTES:
1. MATERIALS & LOCATIONS TO BE VERIFIED BY DEVELOPER PRIOR TO CONSTRUCTION. PROVIDE SAMPLES AND CONSTRUCT MOCK UPS FOR DEVELOPER APPROVAL IN A TIMELY MANNER, SO AS NOT TO DELAY PROJECT. REFER SPECIFICATIONS FOR ADDITIONAL INFORMATION.
2. PAINT ELECTRICAL EQUIPMENT AND MISC METALS TO MATCH ADJACENT TILT WALL FINISH-TYPICAL.
3. SEALANT SHALL MATCH ADJACENT COLOR UNLESS OTHERWISE NOTED.

KEYED NOTES: 2
1. PROVIDE CAST CORNER SHAPES FOR ALL OUTSIDE CORNERS UNLESS NOTED OTHERWISE.
2. STEEL CANOPY. PROVIDE ALL SUPPORT, BLOCKING, FASTENERS AND FLASHING FOR A COMPLETE INSTALLATION.
3. MORTAR COLOR TO MATCH PHASE ONE ALL LOCATIONS. FOLLOW MORTAR COLOR MANUFACTURERS WRITTEN INSTRUCTIONS. TEXTURED COATING ON TILTWALL SHALL MATCH STO MEDIUM FINISH EIFS COATING
4. FINISH COAT OVER EPS CORNICE AND TRIM: SAND PEBBLE FINE TEXTURE. EIFS FINISH COAT OVER DENSGLASS SOFFIT BOARD: SAND PEBBLE FINE TEXTURE.
5. VERIFY STONE PATTERN & COLOR WITH ADJACENT RETAIL DEVELOPMENT AND COORDINATE WITH ALAMO STONE SUPPLIER.

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2 JUL 2019 FOR CONSTRUCTION

NOTES TO 2 SERIES SHEETS:

1. ROOF LINE (DASHED).
2. SCHEDULED ALUMINUM AND GLASS STOREFRONT with 1" INSULATED LOW-E GLASS. REFER FINISH SCHEDULE.
3. SCHEDULED PREFINISHED ROOF PANEL AWNINGS. REFER WALL SECTIONS AND DETAILS.
4. PREFINISHED METAL COPING . REFER 3/A3.5 FOR TYP JOINT COVER.
5. PREFINISHED MTL SCUPPER AND DOWNSPOUT. TIE TO UNDERGROUND. REFER CIVIL DRAWINGS.
6. ROOF ACCESS LADDER. COORDINATE LOCATION W/ UTILITIES AND LANDLORD ON REAR WALL. RE: SHEET A3.5.
7. ELECTRICAL SERVICE. RE: ELECTRICAL DWGS. COORDINATE LOCATIONS WITH DOWNSPOUTS. VERIFY FINAL LOCATION with OWNER.
8. STEEL CANOPY WITH ALUMINUM CLADDING. RE: WALL SECTIONS & DETAILS.
9. CONC TILTWALL PANEL REVEALS-3/4" DEEP TYP. RE: 9/A4.0.
10. EIFS CORNICE AND TRIM.
11. EIFS VEE-GROOVE REVEAL. RE: 9/A4.0.
12. PANEL JOINT W/ INTEGRAL CUSTOM COLOR SEALANT.
13. MASONRY CONTROL JOINT.
14. WALL SCONCE. REFER ELECTRICAL DRAWINGS.
15. SCHEDULED STOREFRONT TRANSOM. CONFIRM W/ OWNER IF AN OPAQUE COATING IS TO BE APPLIED ON BACK OF GLASS.
16. CAST STONE.
17. PREFINISHED MTL OVERFLOW SCUPPER.
18. 2" MINIMUM, RAISED, 12" ALUMINUM, PIN SET ADDRESS NUMBERS.
19. SCHEDULED STONE VENEER.
20. SCHEDULED PREFINISHED ROOF PANELS ON #30 FELT ON F.R.T. PLYWOOD DECK ON MTL FRAMING.
21. LANDSCAPE TRELLIS. REFER LANDSCAPE DRAWINGS.

1

NOTE:
REFER SHEET A2.1 FOR EXTERIOR MATERIAL RATIOS

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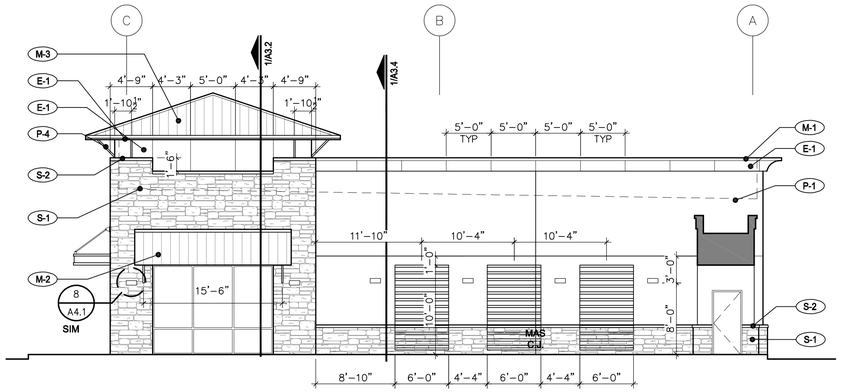
2

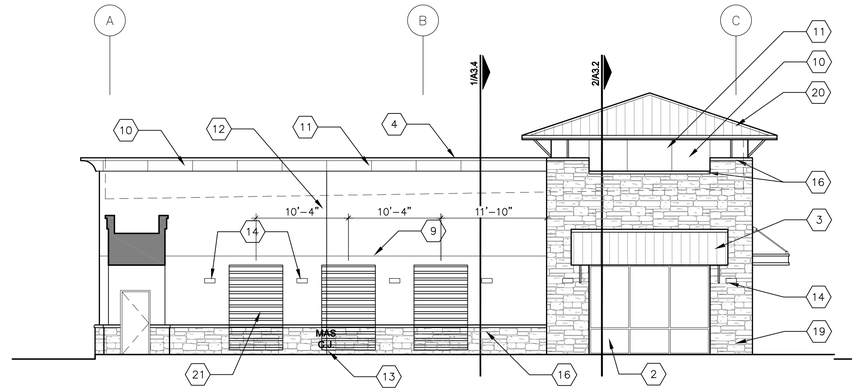
EXTERIOR ELEVATIONS

Sheet No. A2.0



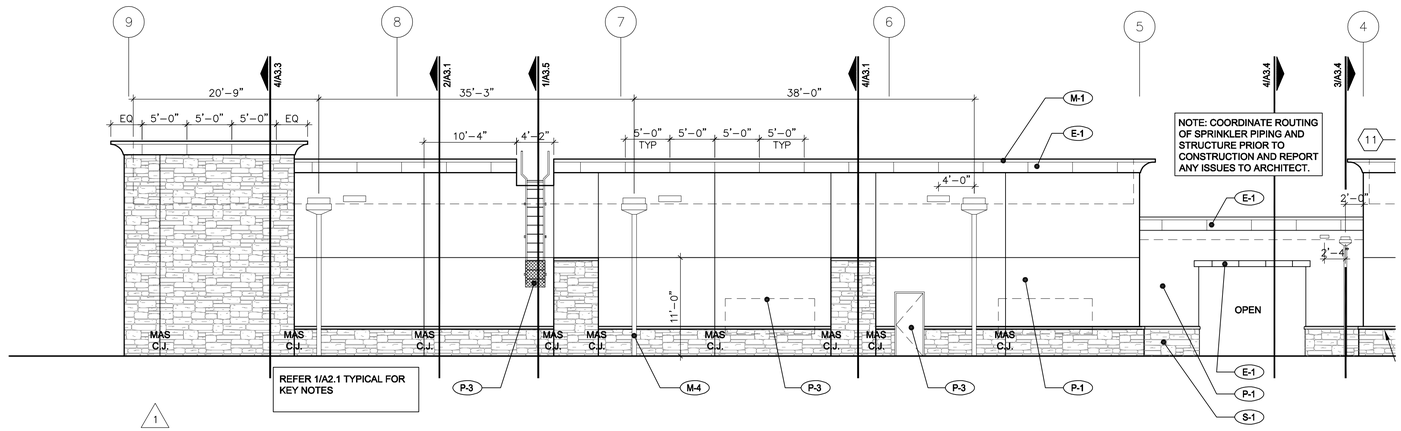
NOTE: REFER 3/A2.1 FOR TYPICAL KEY NOTES

4 EAST ELEVATION @ PATIO
1/8"= 1'-0"



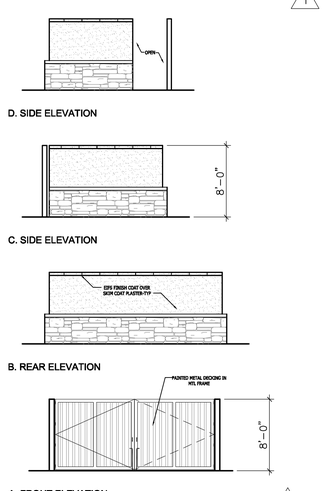
NOTE: REFER 3/A2.1 FOR TYPICAL FINISH NOTES

3 WEST ELEVATION @ PATIO
1/8"= 1'-0"

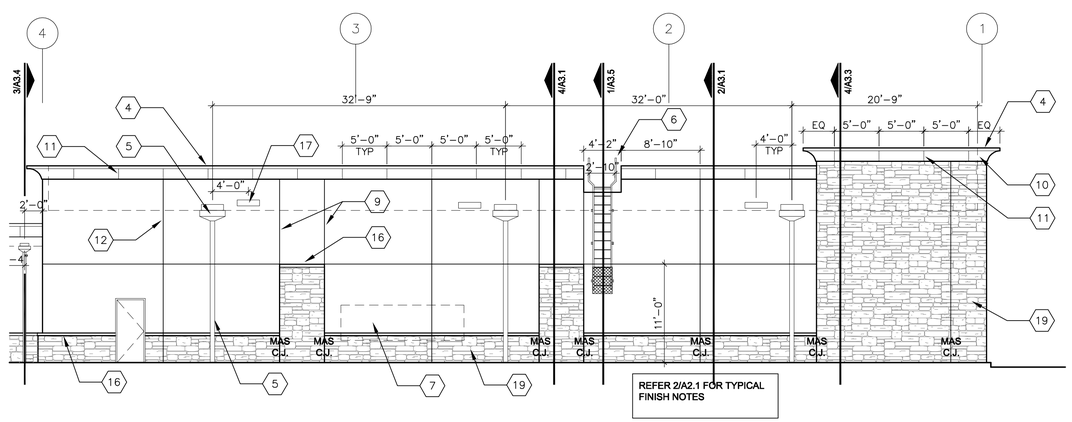


2 NORTH ELEVATION BUILDING A
1/8"= 1'-0"

NOTE: COORDINATE ROUTING OF SPRINKLER PIPING AND STRUCTURE PRIOR TO CONSTRUCTION AND REPORT ANY ISSUES TO ARCHITECT.



5 DUMPSTER ELEVATIONS
1/8"= 1'-0"



1 NORTH ELEVATION BUILDING B
1/8"= 1'-0"

EXTERIOR FINISH RATIOS:

FRONT ELEVATION BLDG 'A' (SOUTH) REFER 1/A2.0
- 2,800 S.F. TOTAL AREA:
- 1,003 S.F. STOREFRONT TRANSPARENCY 36%
- 1,797 S.F. TOTAL OPAQUE AREA 64%
- OPAQUE MATERIALS:
- 781 S.F. STONE 49%
- 474 S.F. TEXTURED CONC (TILTWALL) 21%
- 299 S.F. METAL AWNING 17%
- 243 S.F. EIFS PLASTER 14%

SIDE ELEVATION BLDG 'A' (EAST) REFER 3/A2.0
- 1,739 S.F. TOTAL AREA:
- 226 S.F. STOREFRONT TRANSPARENCY 13%
- 1,513 S.F. TOTAL OPAQUE AREA 87%
- OPAQUE MATERIALS:
- 793 S.F. STONE 52%
- 444 S.F. TEXTURED CONC (TILTWALL) 37%
- 25 S.F. METAL AWNING 2%
- 130 S.F. EIFS PLASTER 9%

REAR (NORTH) ELEVATION BLDG 'A' REFER 2/A2.1
- 2,537 S.F. TOTAL AREA
- 821 S.F. STONE 32%
- 171 S.F. EIFS PLASTER 7%
- 1,545 S.F. TEXTURED CONC (TILTWALL) 61%

FRONT ELEVATION BLDG 'B' (SOUTH) REFER 2/A2.0
- 2,533 S.F. TOTAL AREA
- 869 S.F. STOREFRONT TRANSPARENCY 34%
- 1,716 S.F. TOTAL OPAQUE AREA 66%
- OPAQUE MATERIALS:
- 751 S.F. STONE 47%
- 474 S.F. TEXTURED CONC (TILTWALL) 26%
- 286 S.F. METAL AWNING 17%
- 153 S.F. EIFS PLASTER 10%

SIDE ELEVATION BLDG 'B' (WEST) REFER 4/A2.0
- 1,739 S.F. TOTAL AREA
- 226 S.F. STOREFRONT TRANSPARENCY 13%
- 1,513 S.F. TOTAL OPAQUE AREA 87%
- OPAQUE MATERIALS:
- 755 S.F. STONE 50%
- 608 S.F. TEXTURED CONC (TILTWALL) 40%
- 28 S.F. METAL AWNING 2%
- 122 S.F. EIFS PLASTER 8%

REAR (NORTH) ELEVATION BLDG 'B' REFER 1/A2.1
- 2,537 S.F. TOTAL AREA
- 821 S.F. STONE 32%
- 171 S.F. EIFS PLASTER 7%
- 1,545 S.F. TEXTURED CONC (TILTWALL) 61%

NOTE:
1. AREAS SHOWN ARE PROJECTIONS IN VERTICAL PLANE. ROOF AT TOWERS NOT INCLUDED.
2. PATIO ELEVATIONS NOT INCLUDED IN MATERIALS LIST.

0 4' 8' 16' 24'

Date issued/revised

14 SEP 2018 FOR PERMIT & REVIEW
14 NOV 2018 FOR PRICING
15 MAR FOR PERMIT 1
17 APR 2019 SITE RESUBMITTAL 2
2 JUL 2019 FOR CONSTRUCTION

NOTES TO 2 SERIES SHEETS:

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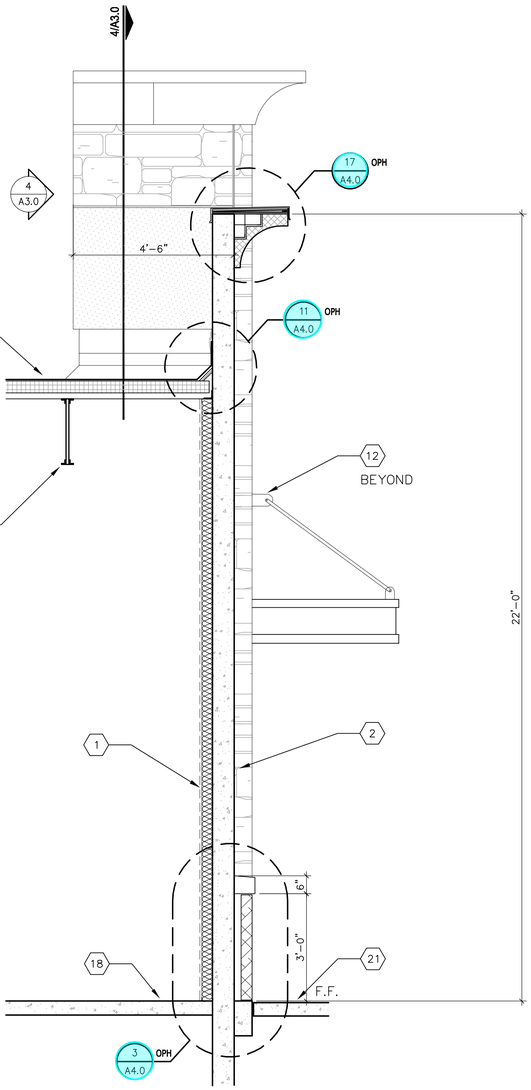
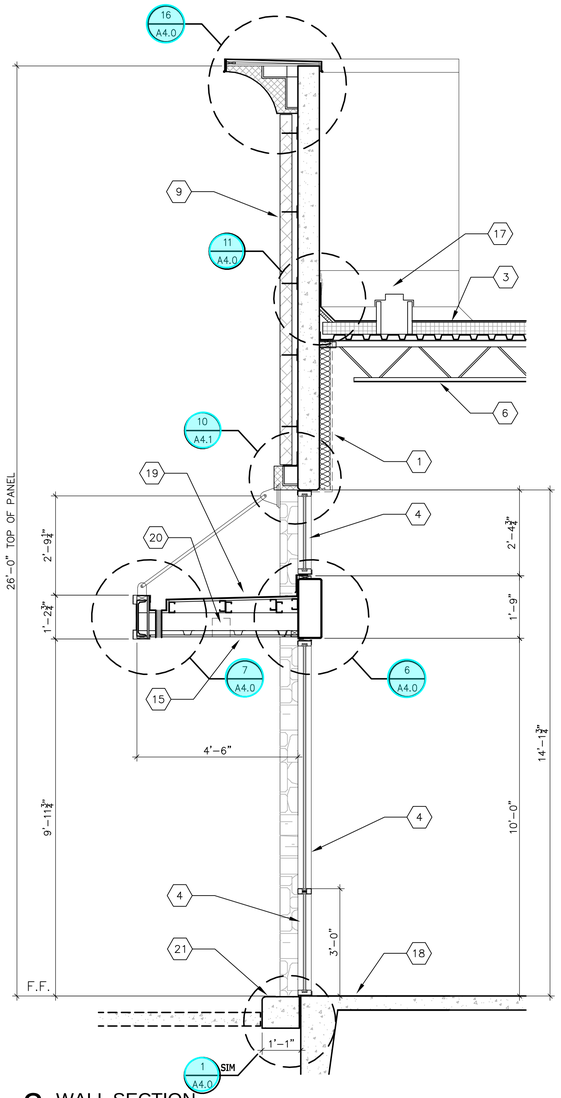
EXTERIOR ELEVATIONS

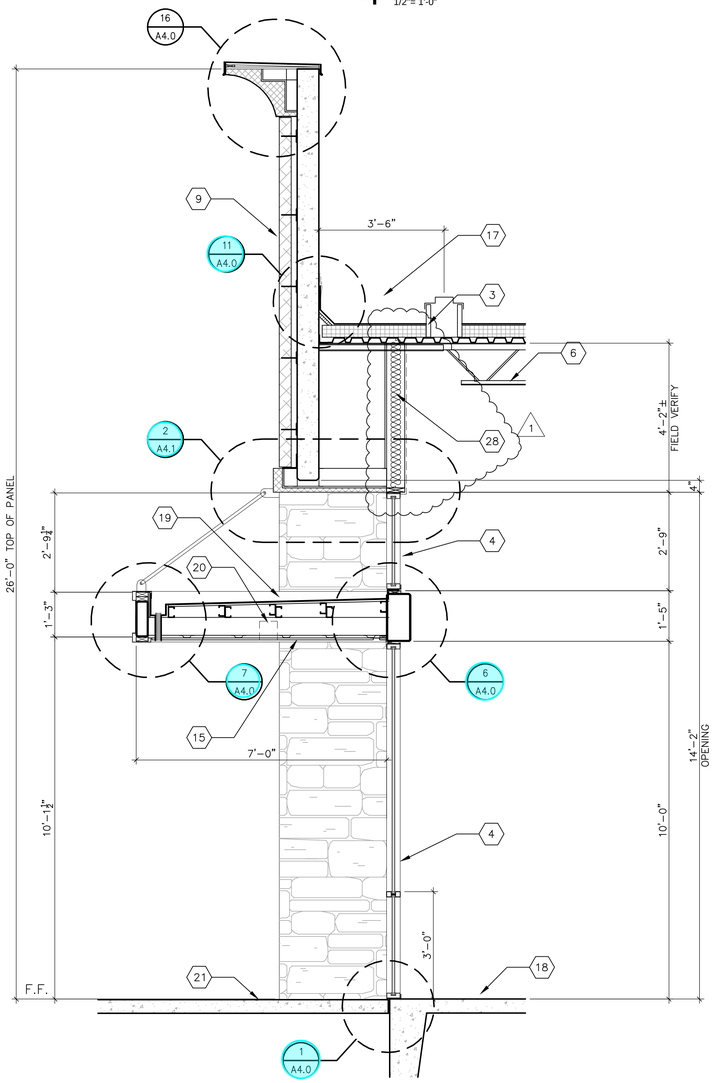
Sheet No. A2.1



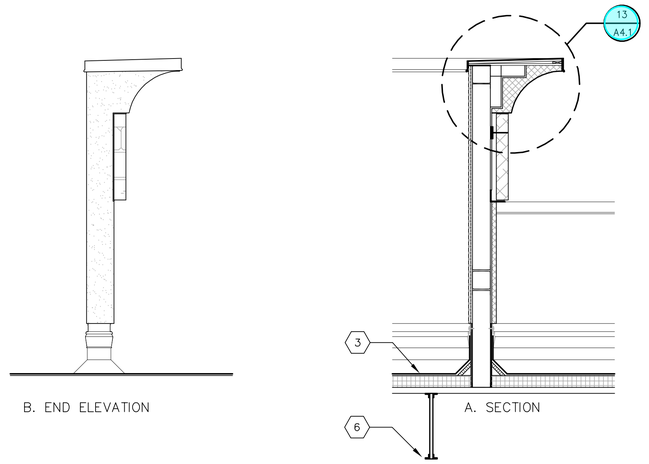
3 WALL SECTION
1/2"= 1'-0"



2 WALL SECTION
1/2"= 1'-0"



1 WALL SECTION
1/2"= 1'-0"



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

Date issued/revised

14 SEP 2018 FOR PERMIT & REVIEW
14 NOV 2018 FOR PRICING
15 MAR 2019 FOR PERMIT
2 JUL 2019 FOR CONSTRUCTION
31 JAN 2020 FRAMING REVISION 1

KEY NOTES TO 3 SERIES SHEETS:

1. 3 5/8" 26 GAUGE MTL STUDS @ 24" OC FULL HEIGHT W/ R-15 BATT INSULATION.
2. TILT WALL PANEL W/SCHEDULED COATING.
3. SCHEDULED ROOF ON RIGID INSULATION ON METAL DECK.
4. SCHEDULED ALUMINUM AND GLASS STOREFRONT W/ 1" INSULATED GLASS.
5. TEE PANEL STANDING SEAM MTL ROOF ON PAINTED STEEL TUBE FRAME. NOTE: UNDERSIDE OF ROOF PANELS TO BE EXPOSED AND PAINTED TO MATCH THE METAL FRAME. NO EXPOSED FASTENERS OF ANY KIND.
6. STL FRAMING. RE: STRUC DWGS.
7. PREFINISHED MTL SCUPPER & 6"X6" DOWNSPOUT.
8. 3/4" DEEP TILT WALL REVEAL. RE: 9/A4.0 & EXTERIOR ELEVATIONS FOR ADDITIONAL INFORMATION.
9. SCHEDULED STONE VENEER. PROVIDE GALV ADJUSTABLE MASONRY TIES AT MINIMUM 1 TIE PER 2 SQUARE FEET WALL SURFACE. HOHMANN & BARNARD HB-213-HS. COORDINATE DEPTH OF TIES REQUIRED FOR PROPER EMBEDMENT.
10. TREATED WOOD BLOCKING.
11. 5'-0" WIDE SLAB LEAVE OUT.
12. PREFINISHED GUTTER STRAPS @ 5'-0" OC-TYP.
13. EIFS TRIM.
14. WALL SCONCE. RE: ELECTRICAL DRAWINGS. MOUNT CENTERED ON CAST STONE MEDALLION. RE: 6/A4.1.
15. 5/8" DENSGLASS W/ EIFS BASE & FINISH COAT ON 3 5/8" GALV HAT CHANNELS @ 16" OC.
16. 30" SQUARE min. FLEXIBLE PLASTIC WALK PAD (5/16" thk. min.)
17. FIVE HOLE PIPE PORTAL FLASHING SYSTEM. PORTALS PLUS 29430 OR APPROVED EQUAL.
18. CONC FOUNDATION. RE: STRUC DRAWINGS.
19. CANOPY W/ TPO ROOFING ON 5/8" EXTERIOR GRADE PLYWOOD DECK ON LIGHT GAUGE MTL FRAMING. SLOPE 1/4"/FT TO GUTTER. PROVIDE ALL SUPPORT, BLOCKING AND FLASHING FOR A COMPLETE INSTALLATION.
20. SCHEDULED RECESSED DOWN LIGHT. COORDINATE INSTALLATION W/ CANOPY FRAMING PRIOR TO CONSTRUCTION. RE: ELECTRICAL DRAWINGS.
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26. 42"H X 36"W KEYED EXTERIOR ACCESS DOOR. BABCOCK DAVIS BXT OR APPROVED EQUAL-PAINT TO MATCH ADJACENT EIFS FINISH.
27. 1 3/8" EIFS ON 1/2" SHEATHING ON 6" MTL STUDS. RE: STRUC DWGS.
28. 5/8" SHEATHING ON 6" 18 GA MTL STUDS @ 16" OC W/ BATT INSULATION. 1

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SHELL BUILDING & SITE WORK DEVELOPMENT

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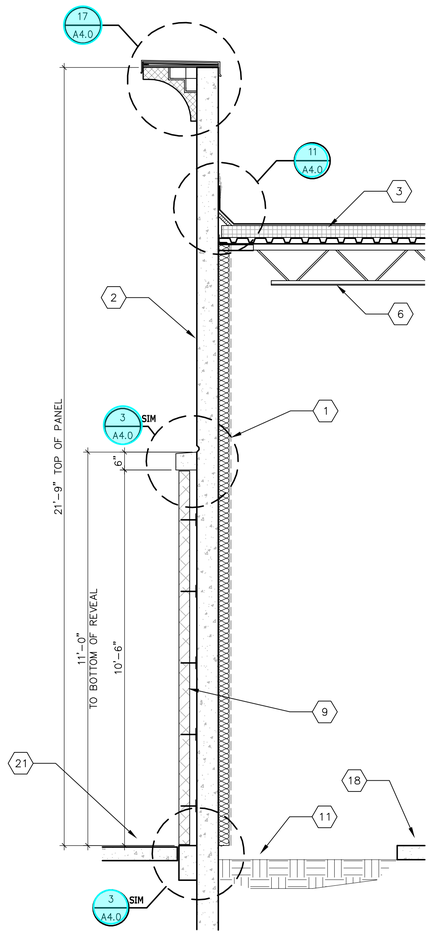
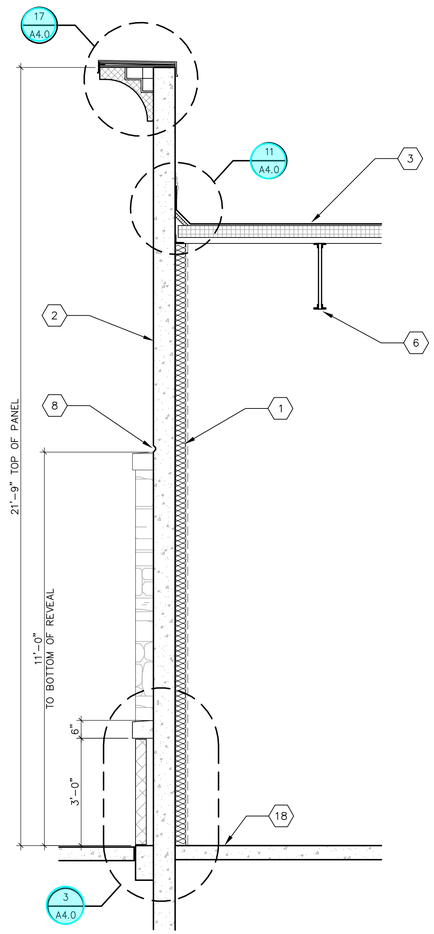
WALL SECTIONS

Sheet No. A3.0



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



3 WALL SECTION
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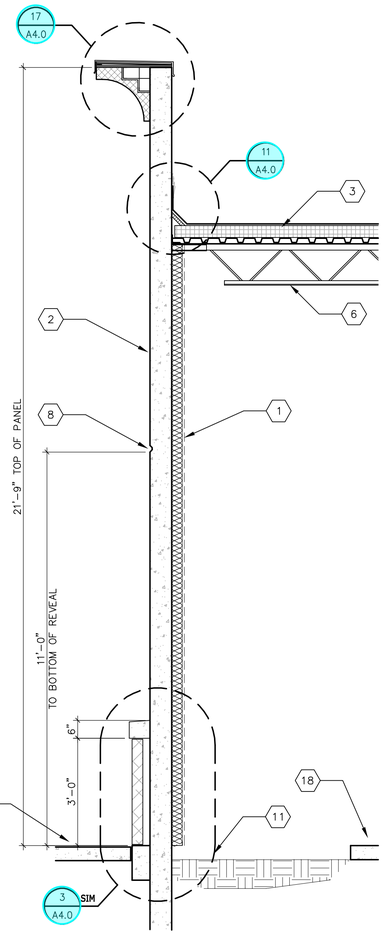
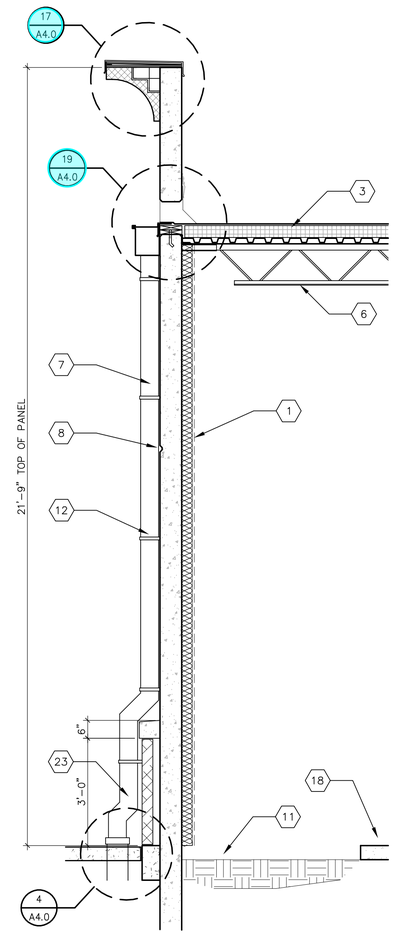


2 WALL SECTION
1/2"= 1'-0"



1 WALL SECTION
1/2"= 1'-0"

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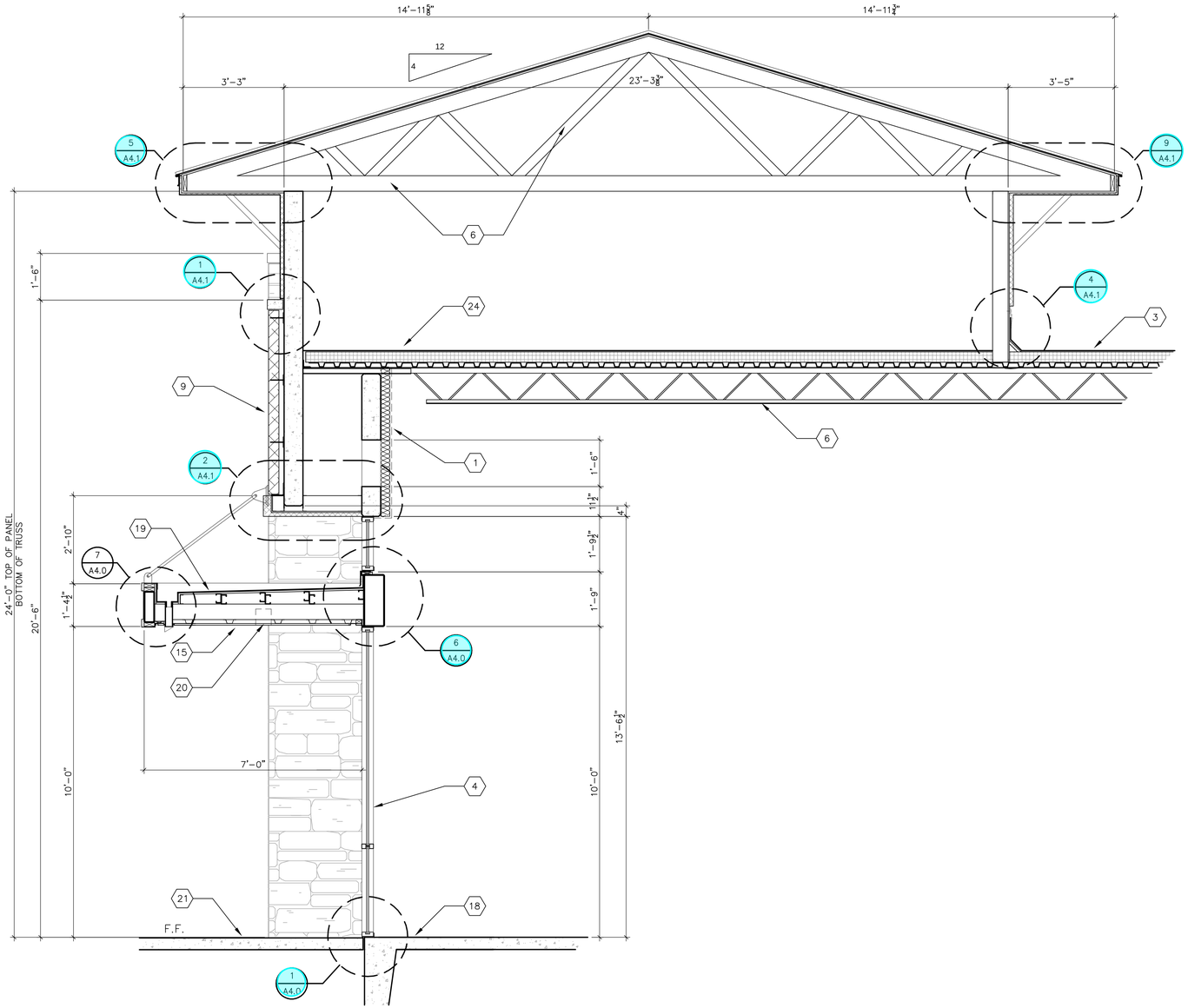
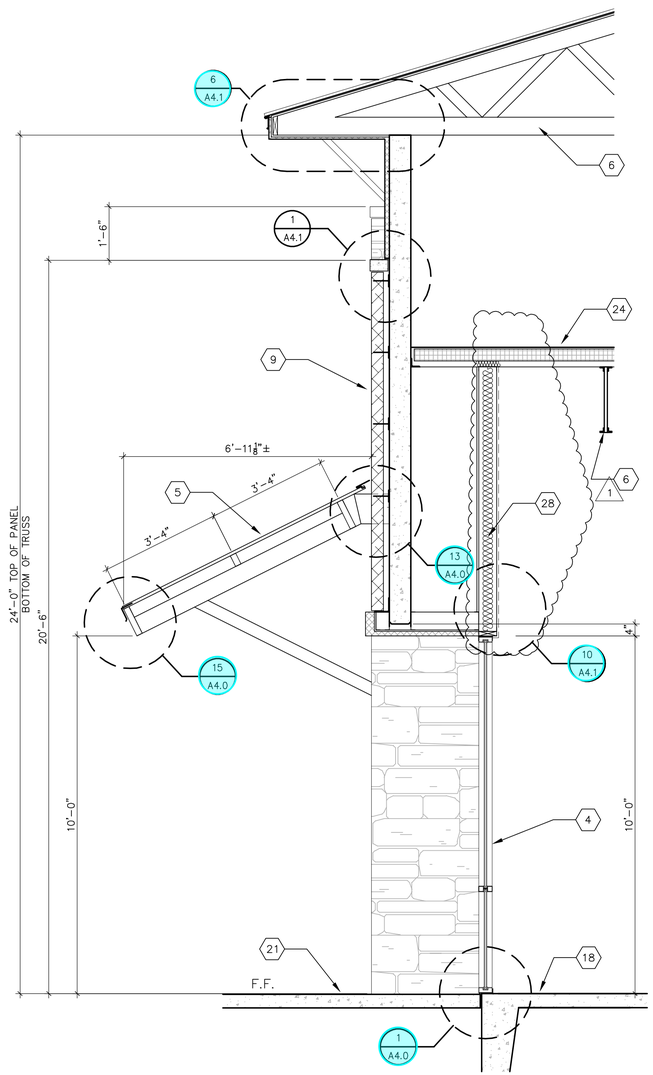
WALL SECTIONS

Sheet No. A3.1



2 WALL SECTION
1/2"= 1'-0"



1 WALL SECTION
1/2"= 1'-0"

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14 SEP 2018 FOR PERMIT & REVIEW
14 NOV 2018 FOR PRICING
15 MAR 2019 FOR PERMIT
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30 JAN 2020 FRAMING REVISION 1

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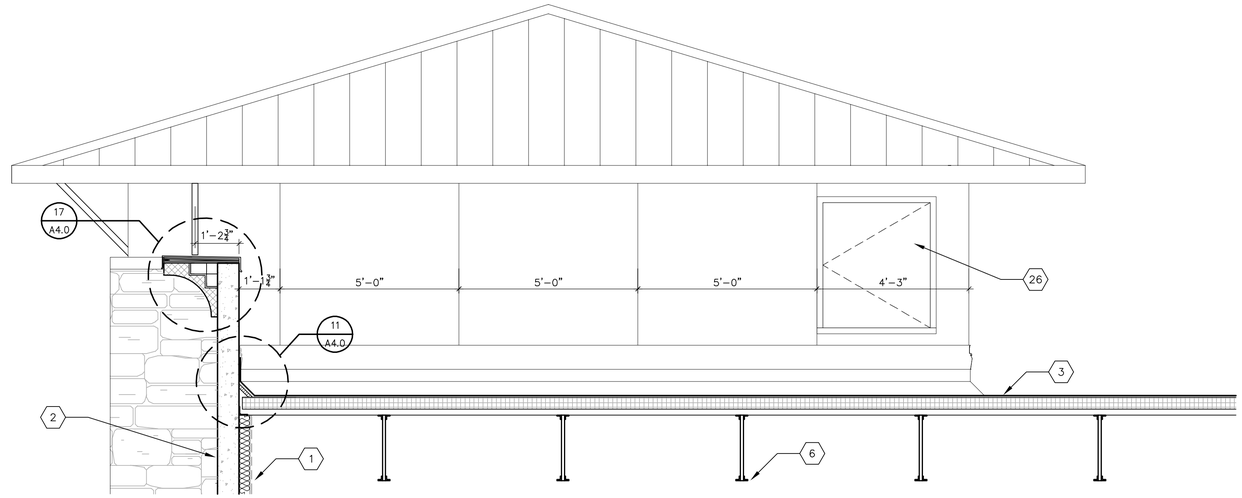
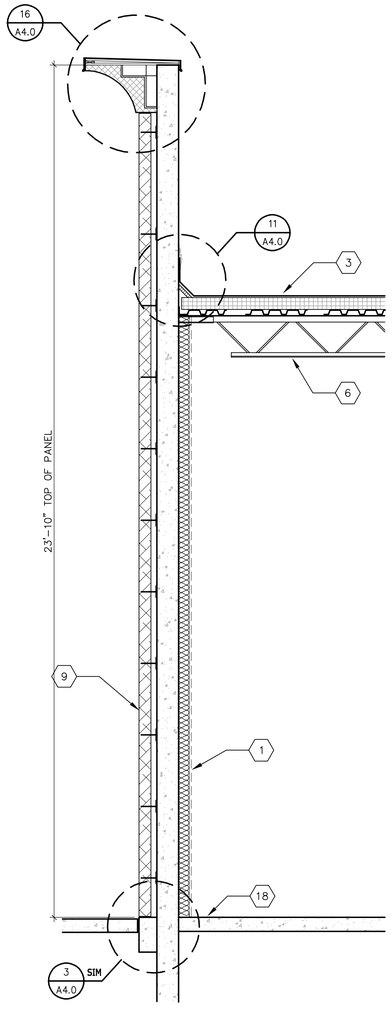
WALL SECTIONS

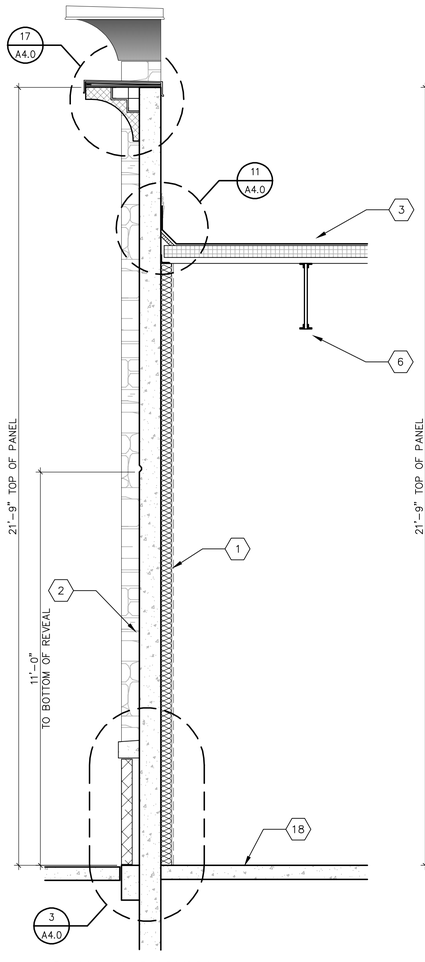
Sheet No. A3.2



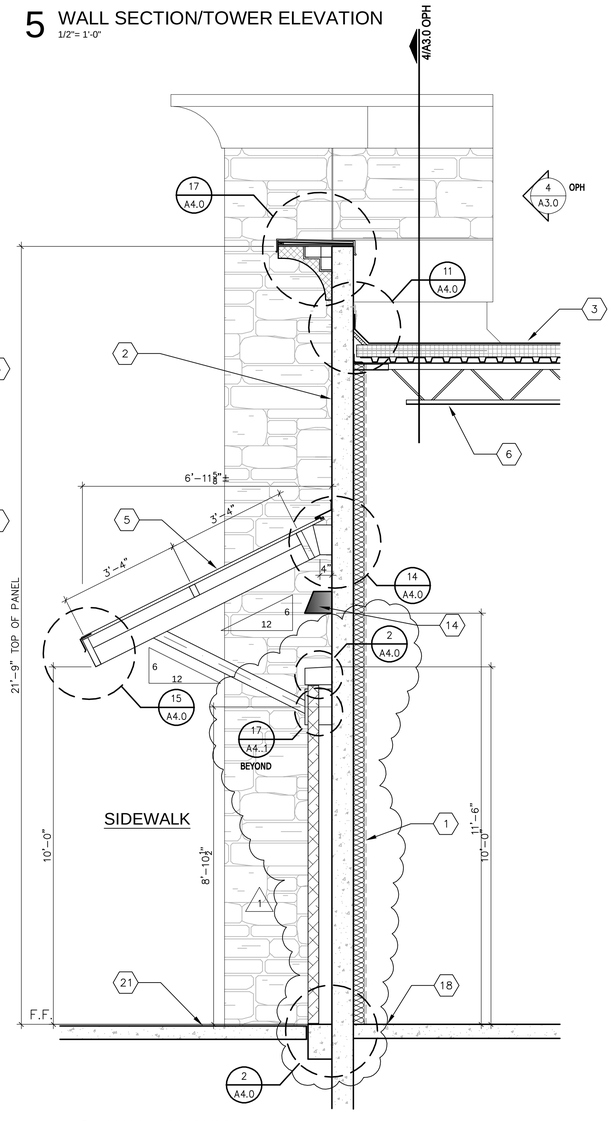
5 WALL SECTION/TOWER ELEVATION
1/2"= 1'-0"



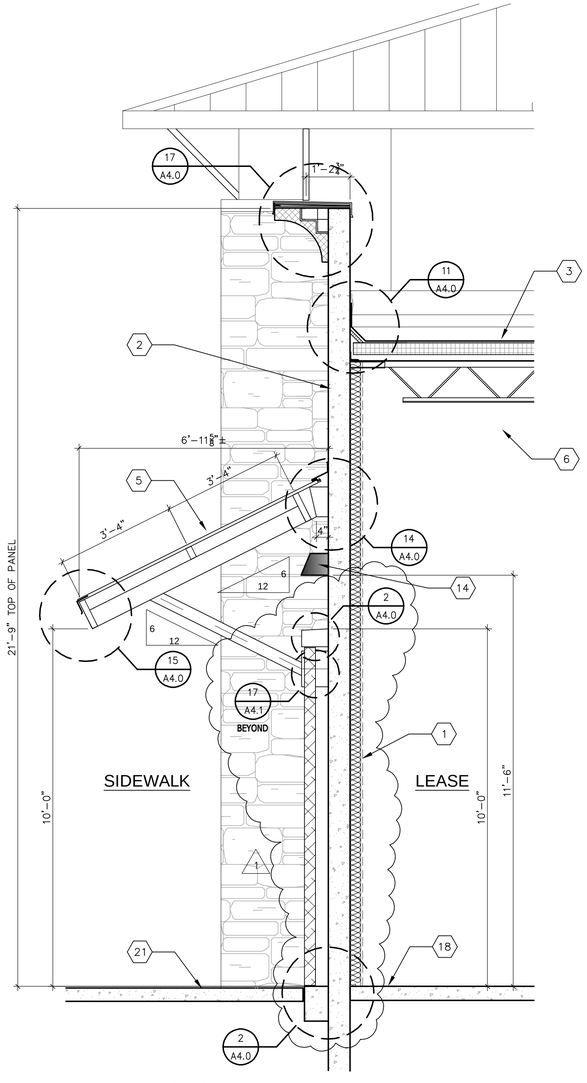
4 WALL SECTION
1/2"= 1'-0"



3 WALL SECTION
1/2"= 1'-0"



2 WALL SECTION
1/2"= 1'-0"



1 WALL SECTION
1/2"= 1'-0"

Date issued/revised

14 SEP 2018 FOR PERMIT & REVIEW
14 NOV 2018 FOR PRICING
15 MAR 2019 FOR PERMIT
2 JUL 2019 FOR CONSTRUCTION
26 SEP REVISED FOR CONSTRUCTION 1

KEY NOTES TO 3 SERIES SHEETS:

1. 3 ⅝" 26 GAUGE MTL STUDS @ 24" OC FULL HEIGHT W/ R-15 BATT INSULATION.
2. TILT WALL PANEL W/SCHEDULED COATING.
3. SCHEDULED ROOF ON RIGID INSULATION ON METAL DECK.
4. SCHEDULED ALUMINUM AND GLASS STOREFRONT W/ 1" INSULATED GLASS.
5. TEE PANEL STANDING SEAM MTL ROOF ON PAINTED STEEL TUBE FRAME. NOTE: UNDERSIDE OF ROOF PANELS TO BE EXPOSED AND PAINTED TO MATCH THE METAL FRAME. NO EXPOSED FASTENERS OF ANY KIND.
6. STL FRAMING. RE: STRUC DWGS.
7. PREFINISHED MTL SCUPPER & 6"X6" DOWNSPOUT.
8. 3/4" DEEP TILT WALL REVEAL. RE: 9/A4.0 & EXTERIOR ELEVATIONS FOR ADDITIONAL INFORMATION.
9. SCHEDULED STONE VENEER. PROVIDE GALV ADJUSTABLE MASONRY TIES AT MINIMUM 1 TIE PER 2 SQUARE FEET WALL SURFACE. HOHMANN & BARNARD HB-213-HS. COORDINATE DEPTH OF TIES REQUIRED FOR PROPER EMBEDMENT.
10. TREATED WOOD BLOCKING.
11. 5'-0" WIDE SLAB LEAVE OUT.
12. PREFINISHED GUTTER STRAPS @ 5'-0" OC-TYP.
13. EIFS TRIM.
14. WALL SCONCE. RE: ELECTRICAL DRAWINGS. MOUNT CENTERED ON CAST STONE MEDALLION. RE: 6/A4.1.
15. 5/8" DENSGLASS W/ EIFS BASE & FINISH COAT ON ⅝" GALV HAT CHANNELS @ 16" OC.
16. 30" SQUARE min. FLEXIBLE PLASTIC WALK PAD (5/16" thk. min.)
17. FIVE HOLE PIPE PORTAL FLASHING SYSTEM. PORTALS PLUS 29430 OR APPROVED EQUAL.
18. CONC FOUNDATION. RE: STRUC DRAWINGS.
19. CANOPY W/ TPO ROOFING ON 5/8" EXTERIOR GRADE PLYWOOD DECK ON LIGHT GAUGE MTL FRAMING. SLOPE 1/4"/FT TO GUTTER. PROVIDE ALL SUPPORT, BLOCKING AND FLASHING FOR A COMPLETE INSTALLATION.
20. SCHEDULED RECESSED DOWN LIGHT. COORDINATE INSTALLATION W/ CANOPY FRAMING PRIOR TO CONSTRUCTION. RE: ELECTRICAL DRAWINGS.
21. CONC SIDEWALK.
22. 6" 18 GA MTL STUDS AT 16" OC. BRACE TO STRUCTURE AT 48" OC MAX.
23. TIE DOWNSPOUT TO UNDERGROUND STORM LINE. REFER CIVIL FOR CONTINUATION.
24. CONTINUE ROOF INSULATION UNDER TOWER.
25. SCHEDULED COATING OVER BLOCK FILLER ON CMU WALL. PREP WALL TO CONCEAL MORTAR JOINTS PRIOR TO FINISH.
26. 42"H X 36"W KEYED EXTERIOR ACCESS DOOR. BABCOCK DAVIS BXT OR APPROVED EQUAL-PAINT TO MATCH ADJACENT EIFS FINISH.
27. 1 ½" EIFS ON ½" SHEATHING ON 6" MTL STUDS. RE: STRUC DWGS.

AS BUILT
WORKMAN
5/26/2020

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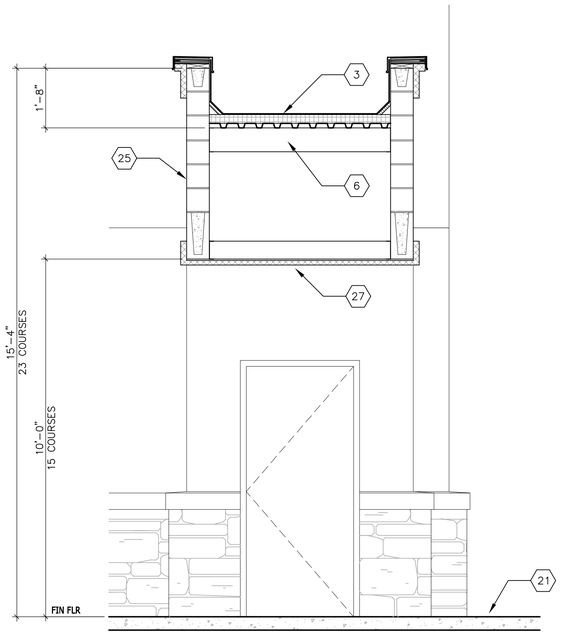
SHELL BUILDING & SITE WORK DEVELOPMENT

720/722 US 79 WEST TOWNWEST COMMONS
HUTTO, TX 78634

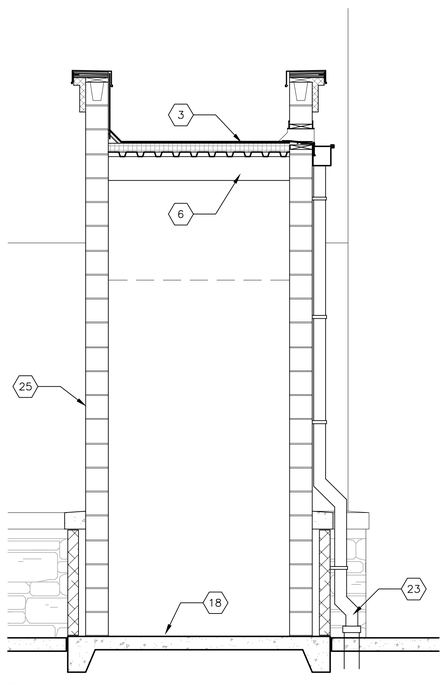
Project No.	18064
Drawn	JS
Checked	BS

WALL SECTIONS

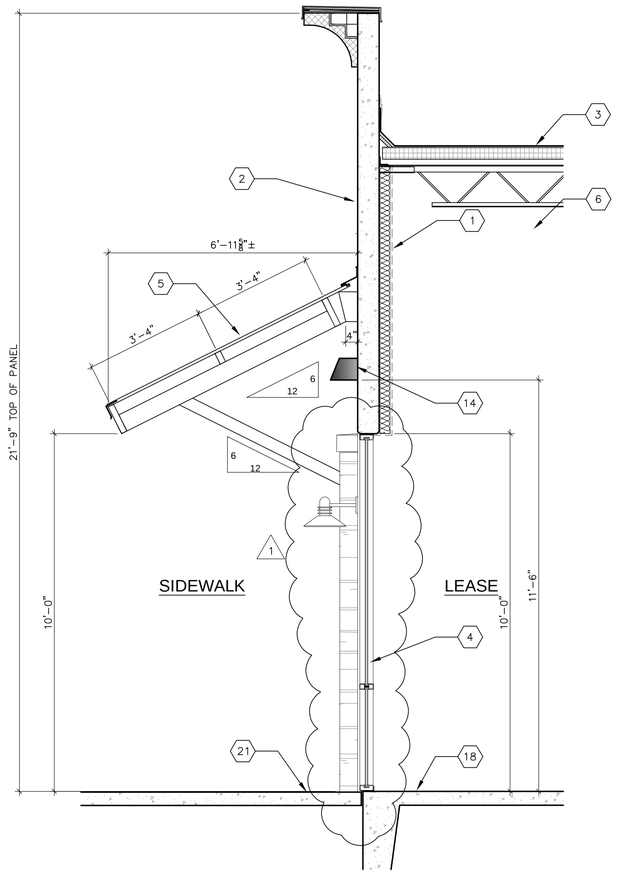
Sheet No. A3.3



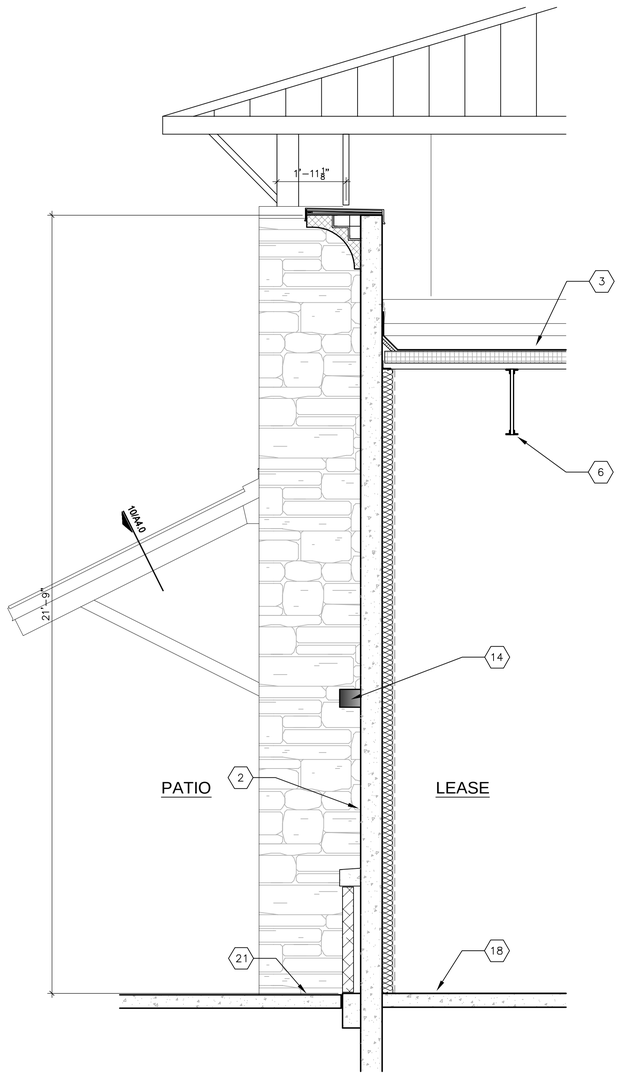
4 WALL SECTION
1/2"= 1'-0"



3 WALL SECTION
1/2"= 1'-0"



2 WALL SECTION
1/2"= 1'-0"



1 WALL SECTION
1/2"= 1'-0"

Date issued/revised

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ASWILT WORKMAN

5/26/2020

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SHELL BUILDING & SITE WORK DEVELOPMENT

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HUTTO, TX 78634

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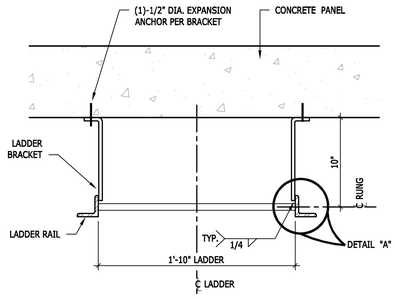
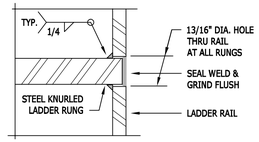
WALL SECTIONS

Sheet No. A3.4

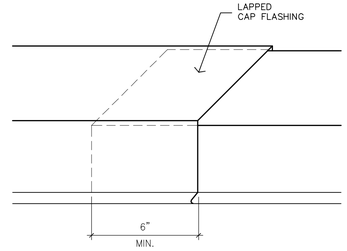


5 LADDER DETAIL
1 1/2"= 1'-0"

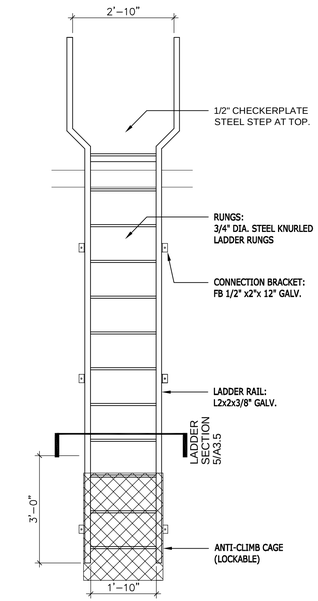


DETAIL "A"

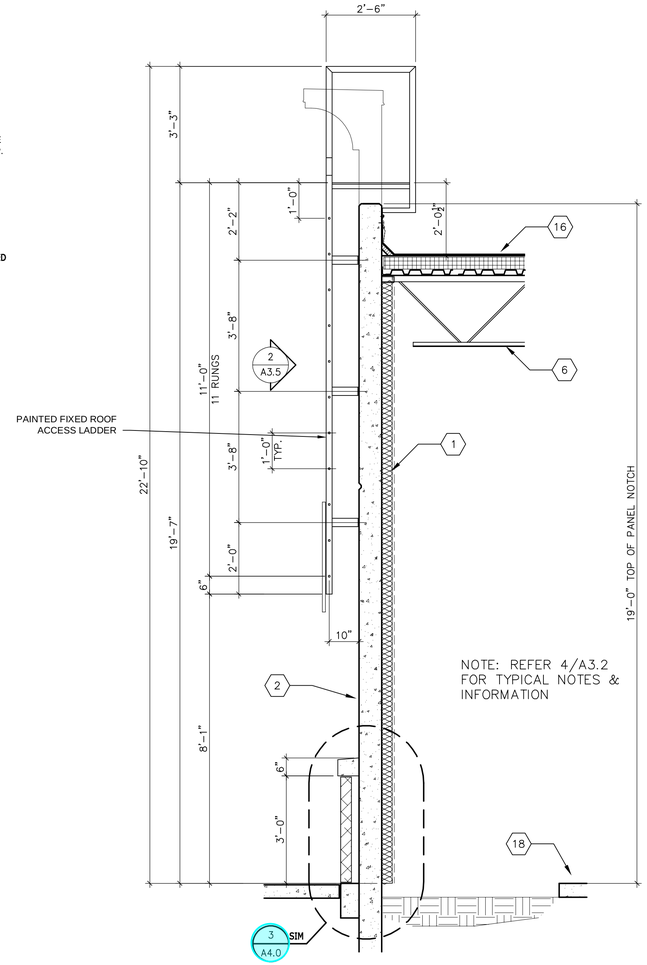
4 LADDER DETAIL
6"= 1'-0"



3 FLASHING JOINT
3"= 1'-0"



2 LADDER EELEVATION
1/2"= 1'-0"



1 WALL SECTION
1/2"= 1'-0"

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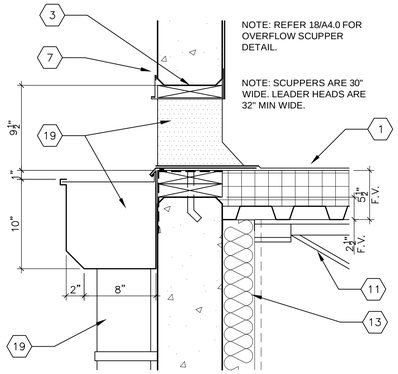
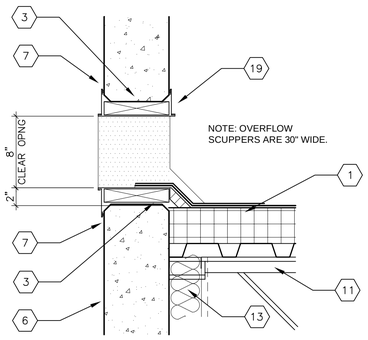
WALL SECTIONS

Sheet No. A3.5



19 DETAIL
1 1/2"= 1'-0"



18 DETAIL
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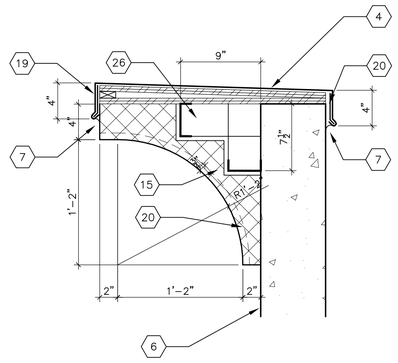

17 DETAIL
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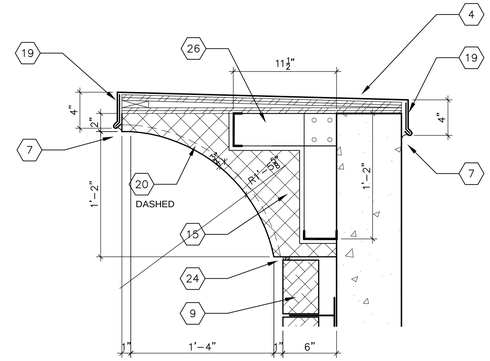

16 DETAIL
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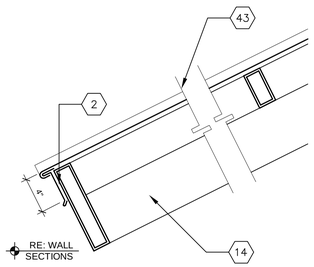
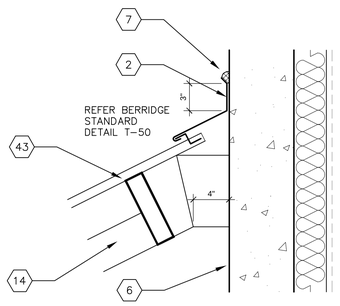


15 DETAIL
1 1/2"= 1'-0"



14 DETAIL
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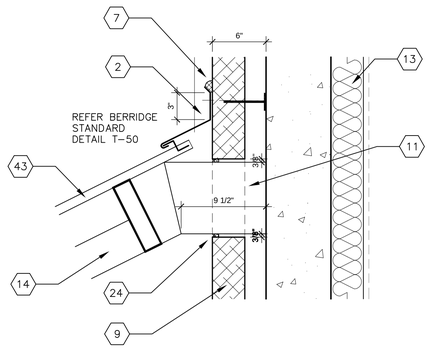

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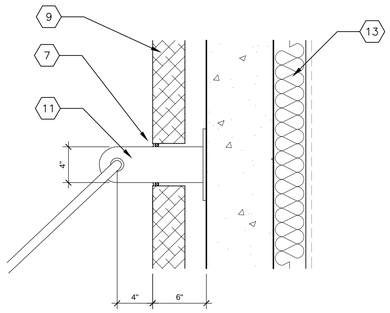

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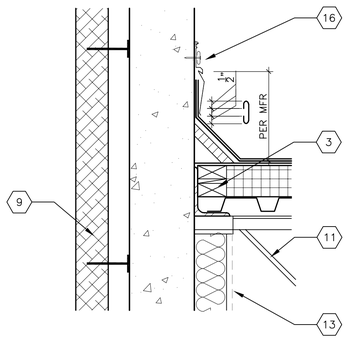

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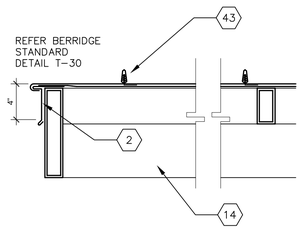

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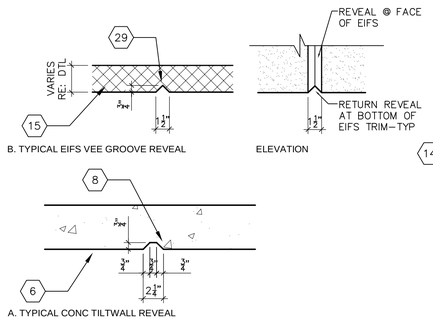
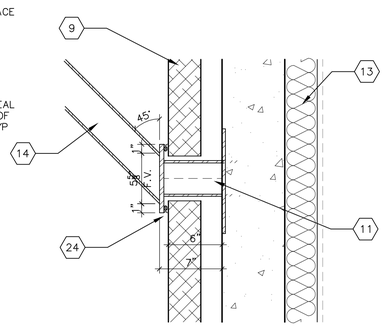
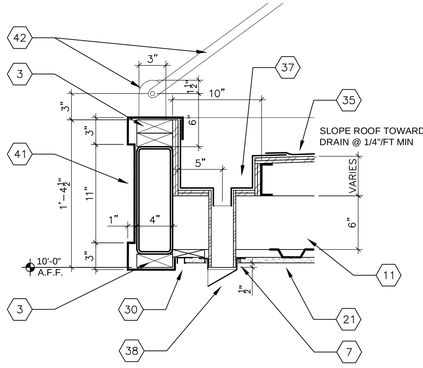


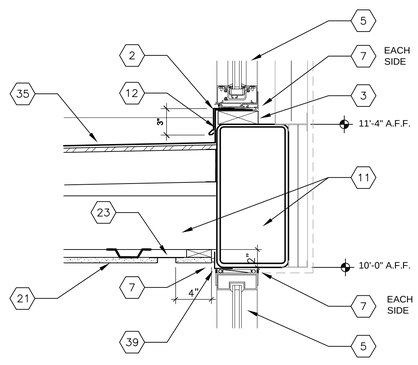
9 DETAIL
1 1/2"= 1'-0"



8 DETAIL
1 1/2"= 1'-0"



7 DETAIL
1 1/2"= 1'-0"



6 DETAIL
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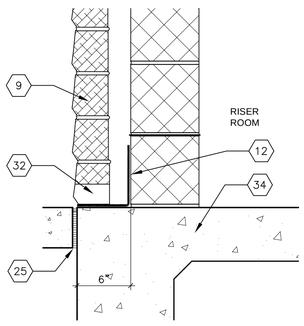
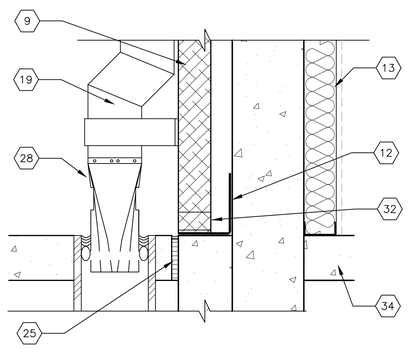
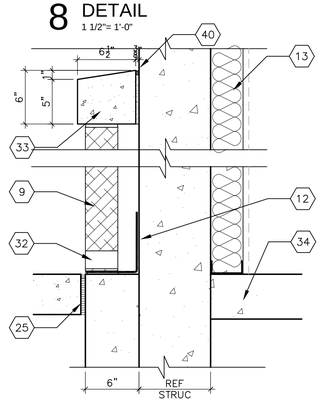


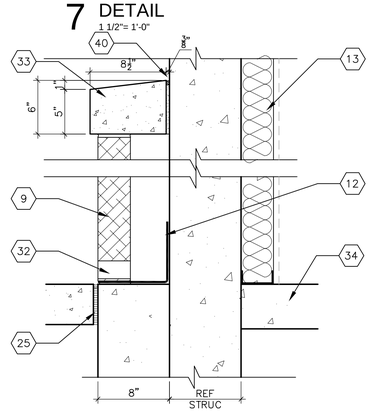
5 DETAIL
1 1/2"= 1'-0"



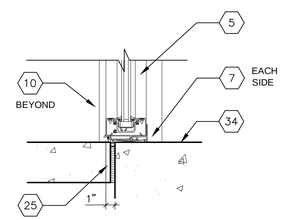
4 DETAIL
1 1/2"= 1'-0"



3 DETAIL
1 1/2"= 1'-0"



2 DETAIL
1 1/2"= 1'-0"



1 DETAIL
1 1/2"= 1'-0"

Date issued/revised

14 SEP 2018 FOR PERMIT & REVIEW
14 NOV 2018 FOR PRICING
15 MAR 2019 FOR PERMIT
2 JUL 2019 FOR CONSTRUCTION

KEYED NOTES TO A4.0 & A4.1:

1. SCHEDULED MODIFIED BITUMEN ROOF ON RIGID INSULATION ON METAL DECK.
2. 24 GAUGE PREFINISHED METAL FLASHING.
3. 2X TREATED WOOD BLOCKING.
4. PREFINISHED MTL COPING ON #30 FELT ON 2 LAYERS 5/8" PLYWOOD W/ 1X WOOD SHIM. SLOPE TO REAR TO DRAIN.
5. SCHEDULED STOREFRONT.
6. TILT WALL PANEL W/ SCHEDULED COATING.
7. SEALANT.
8. CONC REVEAL. RE: SHEET A2.0, A2.1 & WALL SECTIONS FOR LOCATIONS.
9. SCHEDULED MASONRY.
10. OUTSIDE FACE OF CONC TILT WALL PANEL. SET EDGE OF FOUNDATION BACK AS INDICATED. REFER STRUC DWGS FOR ADDITIONAL INFORMATION.
11. STEEL FRAMING. RE: STRUC DWGS.
12. SELF ADHERED MEMBRANE FLASHING-TYP.
13. 3 5/8", 26 GA MTL STUDS @ 24" OC FULL HEIGHT W/ R-15 BATT INSULATION.
14. PAINTED STL CANOPY. PROVIDE ALL SUPPORT, BLOCKING, FASTENERS AND FLASHING FOR A COMPLETE INSTALLATION. REFER STRUC DRAWINGS FOR ADDITIONAL INFORMATION.
15. EIFS TRIM.
16. GALV SPRING LOCK FLASHING AND CONTINUOUS PRESSURE BAR.
17. PREFINISHED MTL TEE-PANEL ROOF ON #30 FELT ON 5/8" EXT GRADE PLYWOOD SHEATHING ON MTL FRAMING. RE: STRUC DWGS FOR SUPPORT.
18. PREFINISHED METAL SCUPPER, LEADER HEAD & DOWNSPOUT. REFER EXTERIOR ELEVATIONS FOR LOCATION. TIE TO UNDERGROUND STORM. RE: CIVIL DRAWINGS FOR ADDITIONAL INFO.
19. CONTINUOUS CLIP. NO EXPOSED FASTENERS.
20. EIFS REVEAL. RE: SHEET A2.0 & A2.1 FOR LOCATIONS.
21. EIFS BASE COAT & FINISH COAT ON 5/8" DENSGLASS SOFFIT ON 7/8" GALV HAT CHANNELS @ 16" OC MAX. COLOR TO MATCH DRYVIT #103, NATURAL WHITE.
22. PREFINISHED MTL TEE PANEL ON PAINTED STL FRAME. PAINT UNDERSIDE OF ROOF PANEL TO MATCH FRAME.
23. CONT VENT. FRY REGLET DCS-625-V-200.
24. BACKER ROD AND SEALANT. COLOR TO MATCH ADJACENT SURFACE.
25. 5/8" EXPANSION FILLER W/ PAVING SEALANT.
26. 3 5/8" 18 GA MTL STUDS @ 16" OC MAX.
27. FACE OF TILTWALL BEYOND (BUILDING LINE).
28. PREFINISHED MTL TRANSITION TO ROUND DRAIN PIPE. CUT DRAIN PIPE FLUSH W/ SIDEWALK.
29. VEE-GROOVE REVEAL. REFER EXTERIOR ELEVATIONS FOR LOCATION.
30. CONTINUOUS REVEAL AT PERIMETER (FRONT & SIDES). FRY REGLET FDM-625-150.
31. SKIM COAT PLASTER WITH BLOCK FILLER OVER JOINTS ON CMU PRIOR TO TEXTURE COATING.
32. WEEPS @ 24" O.C. MAX.
33. CAST STONE. REFER SHEET A2.0.
34. CONC. FLOOR SLAB. RE: STRUC DWGS.
35. 60 MIL TPO ROOF ON 5/8" PLYWOOD DECK ON MTL FRAMING.
36. 1 1/2" EIFS ON 5/8" DENSGLASS ON 6" 18 GA MTL STUDS @ 16" OC.
37. CONT. 24 GA. TPO COATED METAL GUTTER.
38. 3" DIA. PVC DOWNSPOUT THROUGH CANOPY. RE: SHEET A1.2 FOR LOCATIONS. PROVIDE MTL RAIN DIVERTER ON END. PAINT TO MATCH SOFFIT.
39. 2"X2" .070 ANOD ALUMINUM TRIM TO MATCH STOREFRONT ON TREATED WOOD BLOCKING.
40. AT CAST STONE, RAKE JOINT ¾" DEEP AND FILL WITH SEALANT.
41. .070 ALUMINUM BREAK METAL, KYNAR FINISH AS SCHEDULED. CANOPY PROFILE TO MATCH EXISTING SHOPPING CENTER. COOR. IN THE FIELD.
42. STEEL BRACKET AND TIE ROD-PAINT. RE: STRUC DWGS FOR ADDITIONAL INFORMATION.
43. PREFINISHED MTL TEE-PANEL ROOF. PAINT UNDERSIDE.
44. SCHEDULED LIGHT FIXTURE. RE: ELEC DWGS.
45. 1 ¾" EIFS ON TILTWALL PANEL.
46. ¾" EIFS ON ½" SHEATHING ON MTL TRUSS. RE: STRUC DWGS.
47. ½" SHEATHING ON 6" 18 GA MTL STUDS.
48. CONTINUE ROOF INSULATION INSIDE TOWER-TYP.
49. CONTINUOUS REVEAL ALL FOUR SIDE OF TOWER. FRY REGLET FDM-625-V-250. PAINT TO MATCH EIFS.

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AS BUILT
WORKMAN
5/26/2020

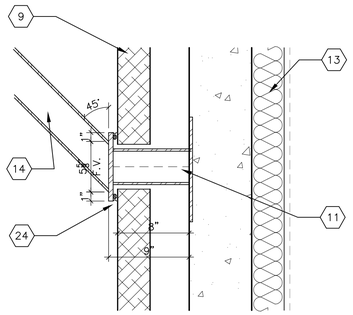
SHELL BUILDING & SITE WORK DEVELOPMENT

720/722 US 79 WEST TOWNWEST COMMONS
HUTTO, TX 78634

Project No.	18064
Drawn	JS
Checked	BS

DETAILS

Sheet No. A4.0



17 DETAIL
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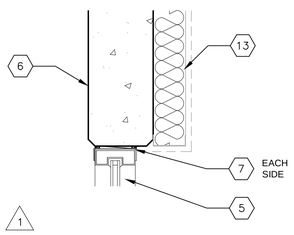

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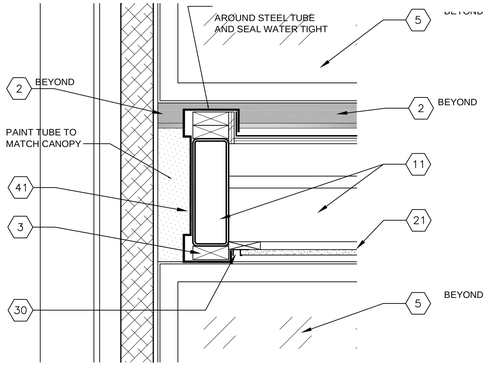

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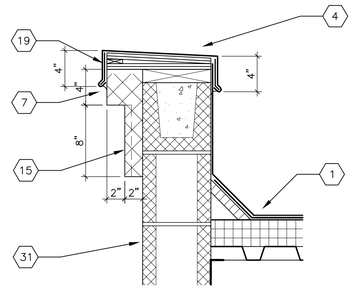
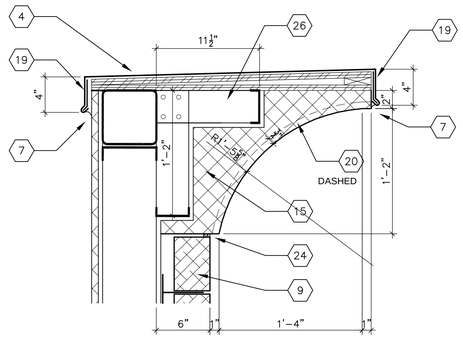
1 1/2"= 1'-0"



14 DETAIL
1 1/2"= 1'-0"



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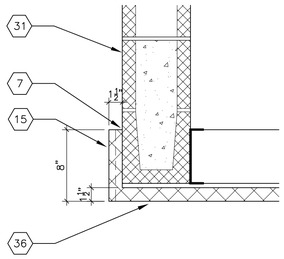

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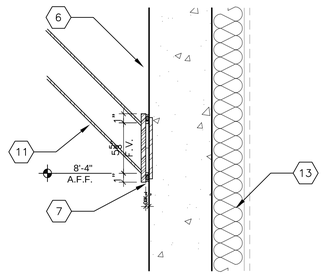
1 1/2"= 1'-0"



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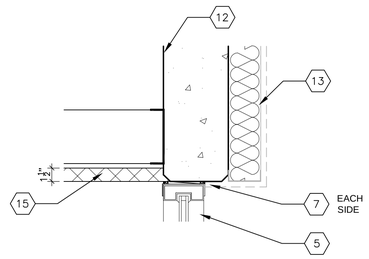
1 1/2"= 1'-0"



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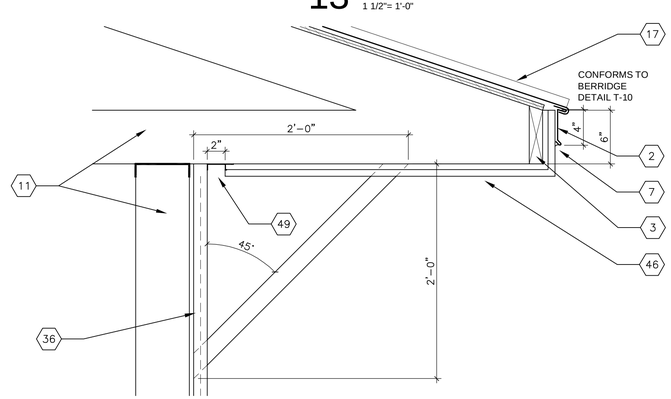
1 1/2"= 1'-0"



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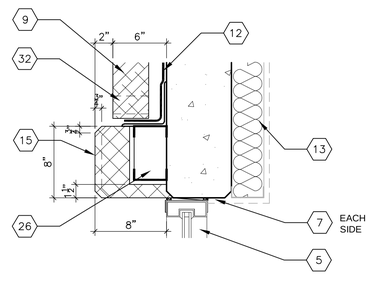
1 1/2"= 1'-0"



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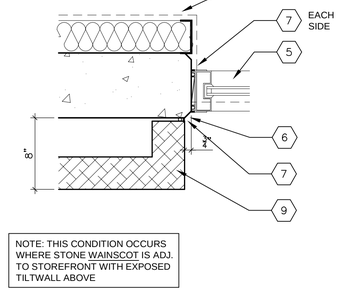
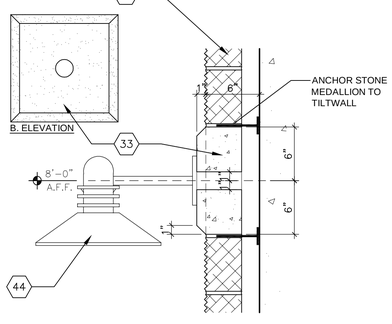
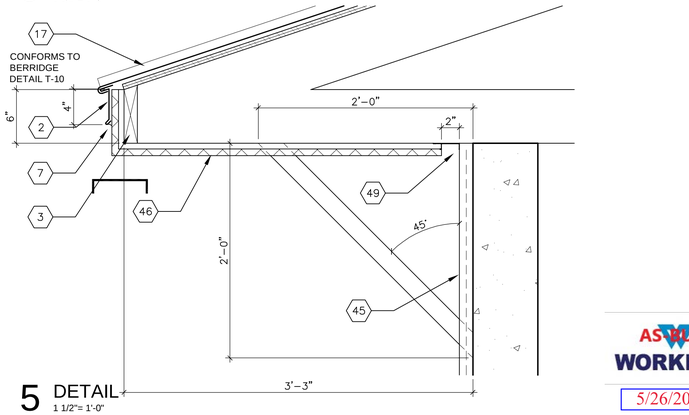


NOTE: THIS CONDITION OCCURS WHERE STONE WAINSCOT IS ADJ. TO STOREFRONT WITH EXPOSED TILTWALL ABOVE

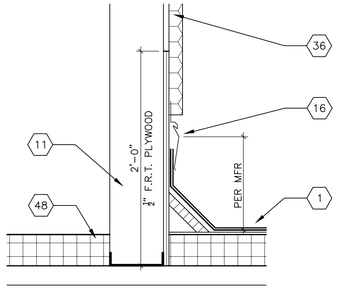
7 PLAN DETAIL
1 1/2"= 1'-0"



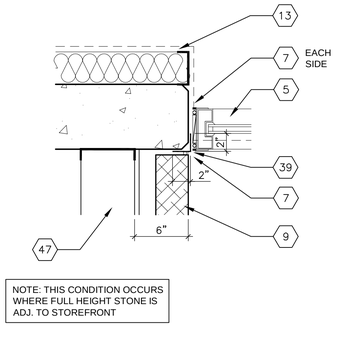
6 DETAIL
1 1/2"= 1'-0"



5 DETAIL
1 1/2"= 1'-0"

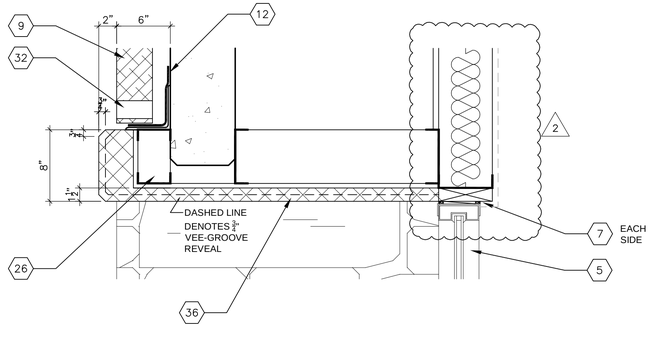


4 DETAIL
1 1/2"= 1'-0"

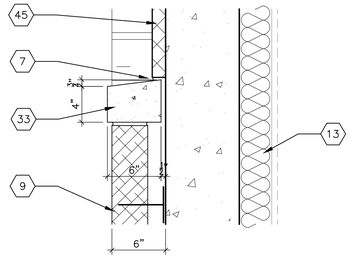


NOTE: THIS CONDITION OCCURS WHERE FULL HEIGHT STONE IS ADJ. TO STOREFRONT

3 PLAN DETAIL
1 1/2"= 1'-0"



2 DETAIL
1 1/2"= 1'-0"



1 DETAIL
1 1/2"= 1'-0"

Date issued/revised

14 SEP 2018 FOR PERMIT & REVIEW
14 NOV 2018 FOR PRICING
15 MAR 2019 FOR PERMIT
2 JUN 2019 FOR CONSTRUCTION
26 SEP 2019 REVISED FOR CONSTRUCTION 1
30 JAN 2020 FRAMING REVISION 2

KEYED NOTES TO A4.0 & A4.1:

1. SCHEDULED MODIFIED BITUMEN ROOF ON RIGID INSULATION ON METAL DECK.
2. 24 GAUGE PREFINISHED METAL FLASHING.
3. 2X TREATED WOOD BLOCKING.
4. PREFINISHED MTL COPING ON #30 FELT ON 2 LAYERS 5/8" PLYWOOD W/ 1X WOOD SHIM. SLOPE TO REAR TO DRAIN.
5. SCHEDULED STOREFRONT.
6. TILT WALL PANEL W/ SCHEDULED COATING.
7. SEALANT.
8. CONC REVEAL. RE: SHEET A2.0, A2.1 & WALL SECTIONS FOR LOCATIONS.
9. SCHEDULED MASONRY.
10. OUTSIDE FACE OF CONC TILT WALL PANEL. SET EDGE OF FOUNDATION BACK AS INDICATED. REFER STRUC DWGS FOR ADDITIONAL INFORMATION.
11. STEEL FRAMING. RE: STRUC DWGS.
12. SELF ADHERED MEMBRANE FLASHING–TYP.
13. 3 ⅝", 26 GA MTL STUDS @ 24" OC FULL HEIGHT W/ R–15 BATT INSULATION.
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16. GALV SPRING LOCK FLASHING AND CONTINUOUS PRESSURE BAR.
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18. PREFINISHED METAL SCUPPER, LEADER HEAD & DOWNSPOUT. REFER EXTERIOR ELEVATIONS FOR LOCATION. TIE TO UNDERGROUND STORM. RE: CIVIL DRAWINGS FOR ADDITIONAL INFO.
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20. EIFS REVEAL. RE: SHEET A2.0 & A2.1 FOR LOCATIONS.
21. EIFS BASE COAT & FINISH COAT ON 5/8" DENSGLASS SOFFIT ON ⅞" GALV HAT CHANNELS @ 16" OC MAX. COLOR TO MATCH DRYVIT #103, NATURAL WHITE.
22. PREFINISHED MTL TEE PANEL ON PAINTED STL FRAME. PAINT UNDERSIDE OF ROOF PANEL TO MATCH FRAME.
23. CONT VENT. FRY REGLET DCS–625–V–200.
24. BACKER ROD AND SEALANT. COLOR TO MATCH ADJACENT SURFACE.
25. 5/8" EXPANSION FILLER W/ PAVING SEALANT.
26. 3 5/8" 18 GA MTL STUDS @ 16" OC MAX.
27. FACE OF TILTWALL BEYOND (BUILDING LINE).
28. PREFINISHED MTL TRANSITION TO ROUND DRAIN PIPE. CUT DRAIN PIPE FLUSH W/ SIDEWALK.
29. VEE–GROOVE REVEAL. REFER EXTERIOR ELEVATIONS FOR LOCATION.
30. CONTINUOUS REVEAL AT PERIMETER (FRONT & SIDES). FRY REGLET FDM–625–150.
31. SKIM COAT PLASTER WITH BLOCK FILLER OVER JOINTS ON CMU PRIOR TO TEXTURE COATING.
32. WEEPS @ 24" O.C. MAX.
33. CAST STONE. REFER SHEET A2.0.
34. CONC. FLOOR SLAB. RE: STRUC DWGS.
35. 60 MIL TPO ROOF ON 5/8" PLYWOOD DECK ON MTL FRAMING.
36. 1 1/2" EIFS ON 5/8" DENSGLASS ON 6" 18 GA MTL STUDS @ 16" OC.
37. CONT. 24 GA. TPO COATED METAL GUTTER.
38. 3" DIA. PVC DOWNSPOUT THROUGH CANOPY. RE: SHEET A1.2 FOR LOCATIONS. PROVIDE MTL RAIN DIVERTER ON END. PAINT TO MATCH SOFFIT.
39. 2"X2" .070 ANOD ALUMINUM TRIM TO MATCH STOREFRONT ON TREATED WOOD BLOCKING.
40. AT CAST STONE, RAKE JOINT ¾" DEEP AND FILL WITH SEALANT.
41. .070 ALUMINUM BREAK METAL. KYNAR FINISH AS SCHEDULED. CANOPY PROFILE TO MATCH EXISTING SHOPPING CENTER. COOR. IN THE FIELD.
42. STEEL BRACKET AND TIE ROD–PAINT. RE: STRUC DWGS FOR ADDITIONAL INFORMATION.
43. PREFINISHED MTL TEE–PANEL ROOF. PAINT UNDERSIDE.
44. SCHEDULED LIGHT FIXTURE. RE: ELEC DWGS.
45. 1 ½" EIFS ON TILTWALL PANEL.
46. ¾" EIFS ON ½" SHEATHING ON MTL TRUSS. RE: STRUC DWGS.
47. ½" SHEATHING ON 6" 18 GA MTL STUDS.
48. CONTINUE ROOF INSULATION INSIDE TOWER–TYP.
49. CONTINUOUS REVEAL ALL FOUR SIDE OF TOWER. FRY REGLET FDM–625–V–250. PAINT TO MATCH EIFS.

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WORKMAN
5/26/2020

SHELL BUILDING & SITE WORK DEVELOPMENT

720/722 US 79 WEST TOWNWEST COMMONS
HUTTO, TX 78634

Project No.	18064
Drawn	JS
Checked	BS

DETAILS

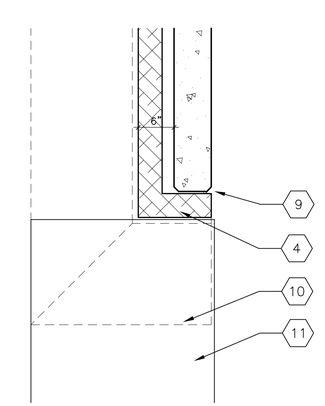
Sheet No. A4.1

Date issued/revised

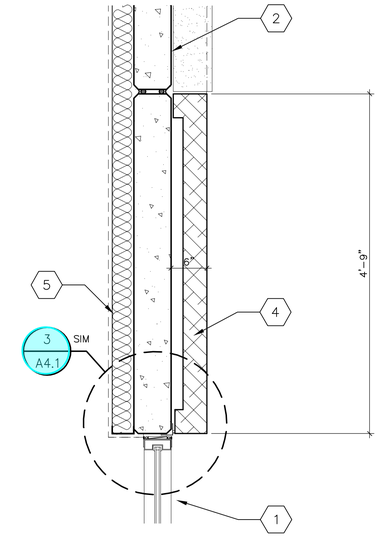
14 SEP 2018 FOR PERMIT & REVIEW
14 NOV 2018 FOR PRICING
15 MAR 2019 FOR PERMIT
2 JUL 2019 FOR CONSTRUCTION

KEYED NOTES TO A4.2:

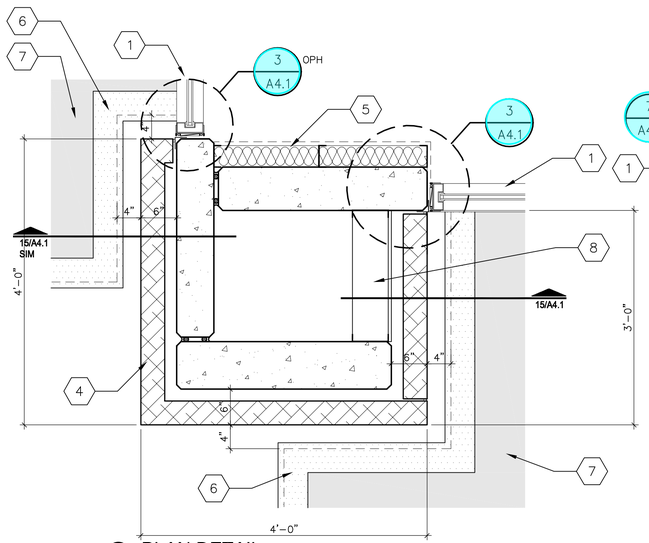
1. SCHEDULED STOREFRONT.
2. TILT WALL PANEL W/ SCHEDULED COATING.
3. SEALANT.
4. SCHEDULED MASONRY.
5. 3 5/8", 26 GA MTL STUDS @ 24" OC FULL HEIGHT W/ R-15 BATT INSULATION.
6. ANODIZED ALUM CLAD STL CANOPY. PROVIDE ALL SUPPORT, BLOCKING, FASTENERS AND FLASHING FOR A COMPLETE INSTALLATION. REFER STRUC DRAWINGS FOR ADDITIONAL INFORMATION.
7. 60 MIL TPO ROOF ON 5/8" PLYWOOD DECK ON MTL FRAMING.
8. 5/8" SHEATHING ON 6" 18 GA MTL STUDS @ 16" OC MAX
9. BACKER ROD & SEALANT. COLOR TO MATCH MASONRY.
10. LINE OF CORNICE ABOVE (DASHED).
11. CORNICE BELOW.



5 PLAN DETAIL
1"= 1'-0"



4 PLAN DETAIL
1"= 1'-0"



3 PLAN DETAIL
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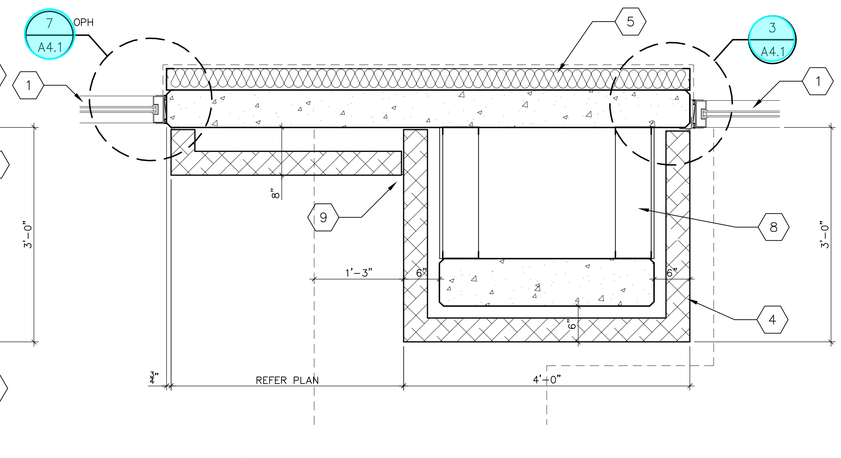
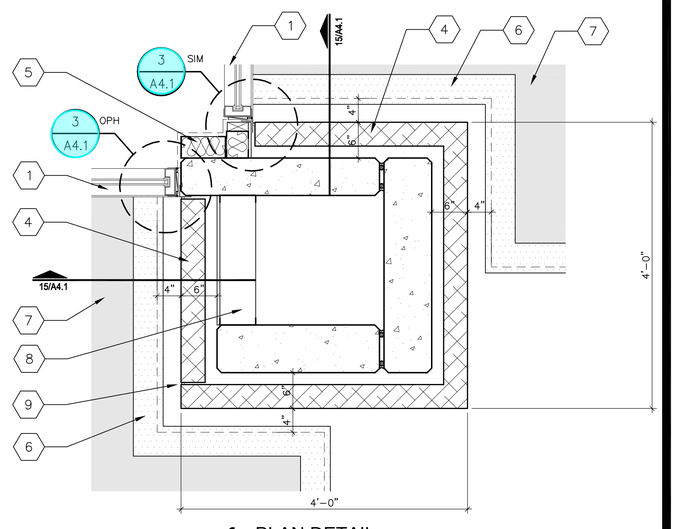


2 PLAN DETAIL
1"= 1'-0"



1 PLAN DETAIL
1"= 1'-0"

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WORKMAN
5/26/2020

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SHELL BUILDING & SITE WORK DEVELOPMENT

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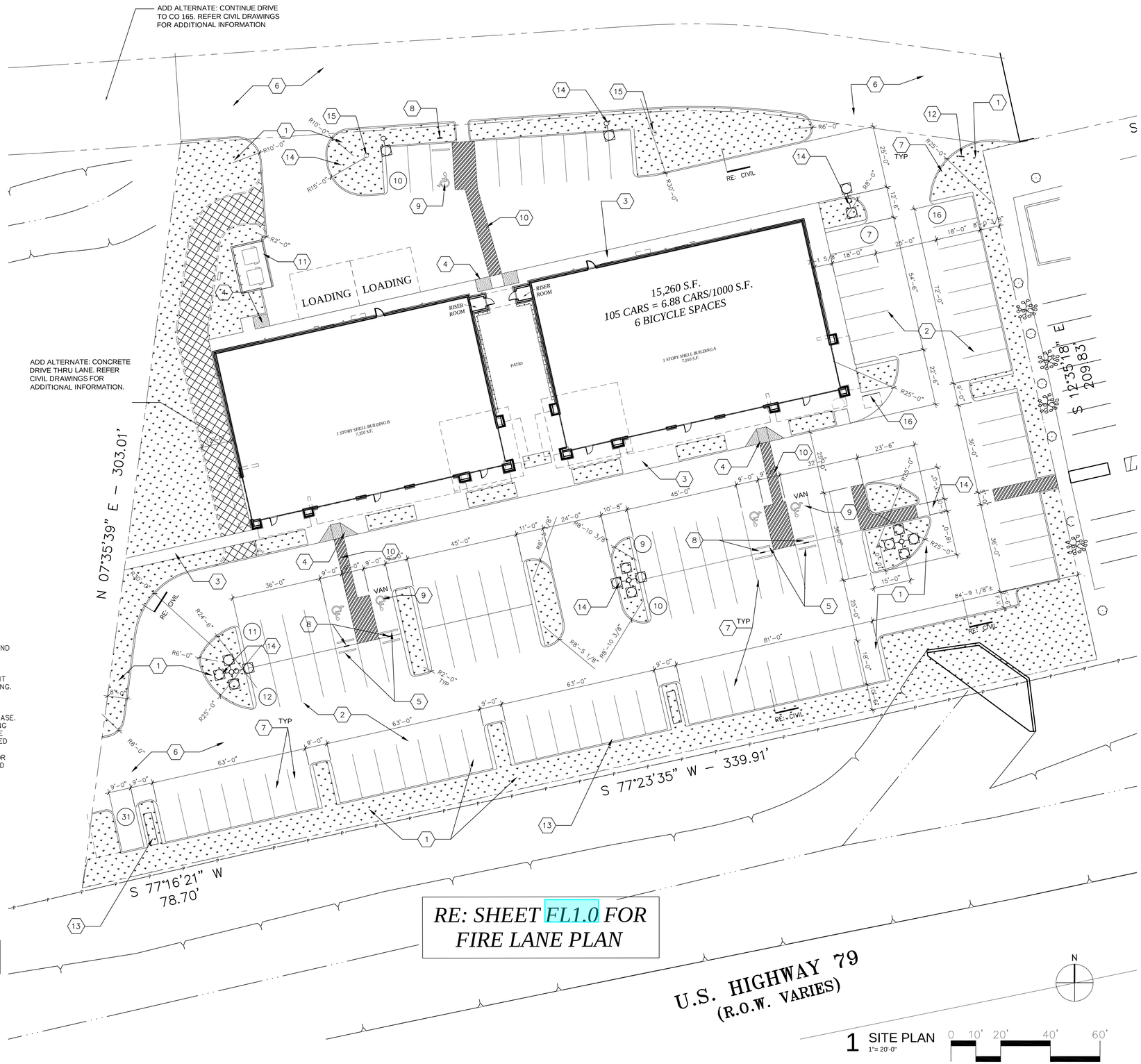
HUTTO, TX 78634

Project No.	18064
Drawn	JS
Checked	BS

DETAILS

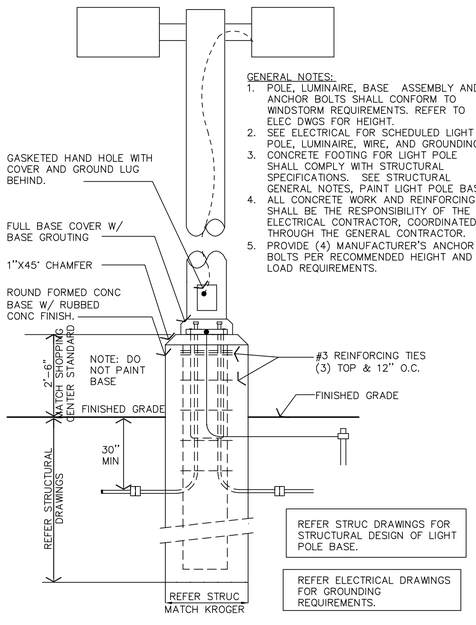
Sheet No. A4.2



1 SITE PLAN
1"= 20'-0"

0 10' 20' 40' 60'

N



2 LIGHT POLE BASE
1/2" = 1'-0"

Date issued/revised

14 SEP 2018 FOR PERMIT & REVIEW
7 NOV 2018 CITY COMMENTS /1
14 NOV 2019 FOR PRICING
15 MAR 2019 FOR PERMIT /2
2 JUL 2019 FOR CONSTRUCTION

KEYED NOTES TO SHEET:

1. LANDSCAPE AREA. REFER LANDSCAPE AND IRRIGATION DRAWINGS.
2. 4" WIDE PAINTED WHITE STRIPING-TYP.
3. CONC. SIDEWALK. RE: SHEET A1.5.
4. CURB RAMP. RE: 13A/4/AS1.1.
5. WHEEL STOP. RE: 8/AS1.1
6. CONC PAVING. REFER CIVIL.
7. 18" WIDE CURB. RE: 16/AS1.1
8. ACCESSIBLE PARKING SIGN. RE: 11/AS1.1
9. PAINTED SYMBOL. RE: 17/AS1.1
10. 4" WIDE PAINTED WHITE STRIPING @ 24" OC., 45°-TYP.
11. DUMPSTER ENCLOSURE. RE: 1/AS1.1
12. STOP SIGN. RE: 18/AS1.1
13. FUTURE SIGN BY OWNER (N.I.C.). REFER ELEC DWGS.
14. SITE LIGHTING. REFER 2/AS1.0.
15. REMOTE FIRE DEPARTMENT CONNECTION. REFER CIVIL DRAWINGS.
16. BICYCLE RACK. RIBBON RACK RB07 OR EQUAL. (6) SPACES REQUIRED-(7) SPACES PROVIDED.

GENERAL NOTES TO SHEET:

1. REFER CIVIL DRAWINGS FOR FINISH FLOOR ELEVATION AND GRADING PLAN.
2. REFER CIVIL DRAWINGS FOR DIMENSIONAL CONTROL PLAN.
3. REFER CIVIL DRAWINGS FOR PAVING PLAN.
4. COORDINATE LIGHT POLE LOCATIONS W/ BOTH OVERHEAD AND UNDERGROUND UTILITIES, BOTH EXISTING AND NEW, PRIOR TO CONSTRUCTION AND NOTIFY ARCHITECT AND ENGINEER OF ANY CONFLICT.

LEGEND:

(##) DENOTES NUMBER OF PARKING SPACES

AS-BUILT
WORKMAN
5/26/2020

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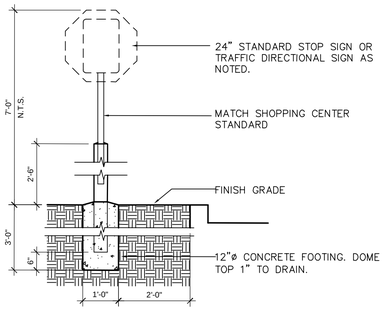
Project No. 18064
Drawn
Checked

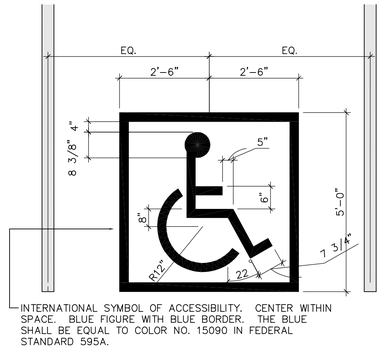
2

SITE PLAN

Sheet No. AS1.0

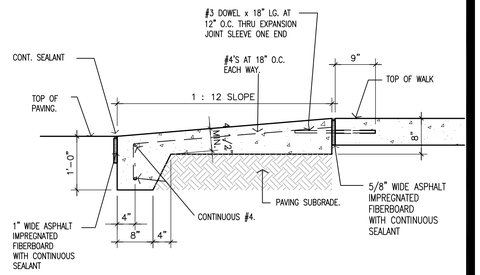


18 DETAIL
1/2"= 1'-0"

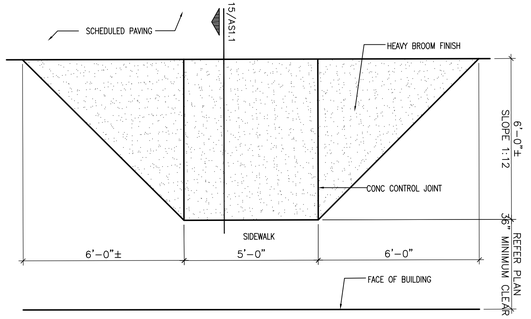


17 DETAIL
1/2"= 1'-0"

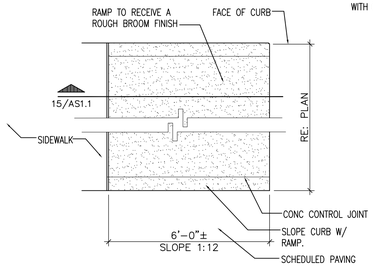
16 NOT USED
3/4"= 1'-0"



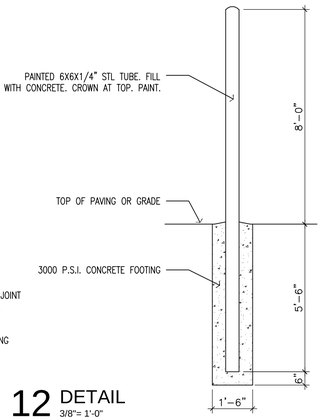
15 DETAIL
3/4"= 1'-0"



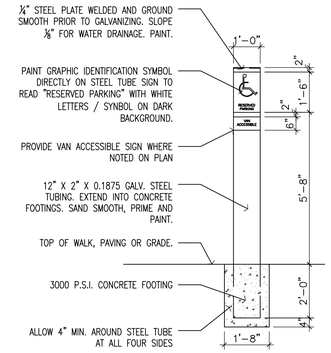
14 DETAIL
3/8"= 1'-0"



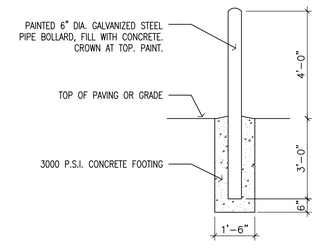
13 DETAIL
3/8"= 1'-0"



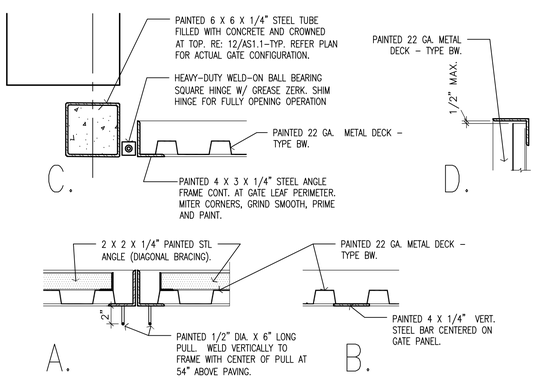
12 DETAIL
3/8"= 1'-0"



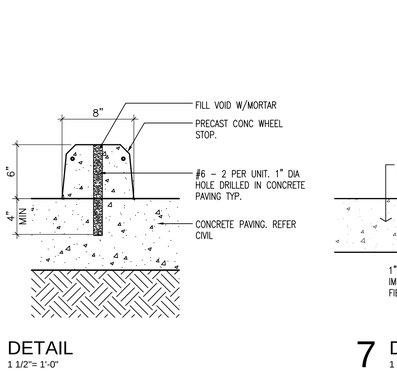
11 DETAIL
3/8"= 1'-0"



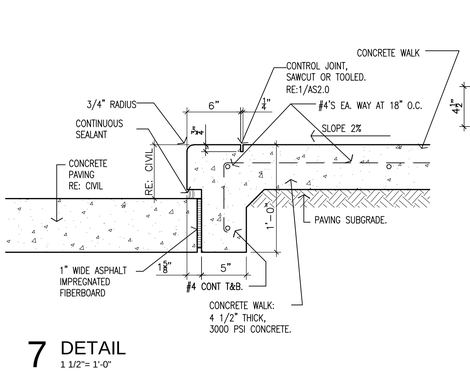
10 DETAIL
3/8"= 1'-0"



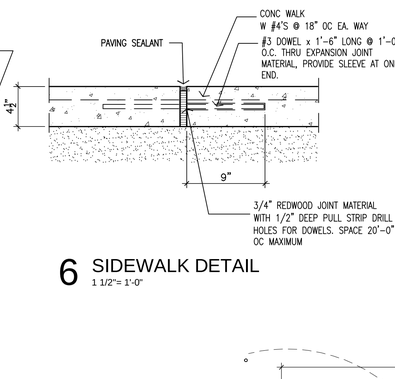
9 GATE DETAILS
1 1/2"= 1'-0"



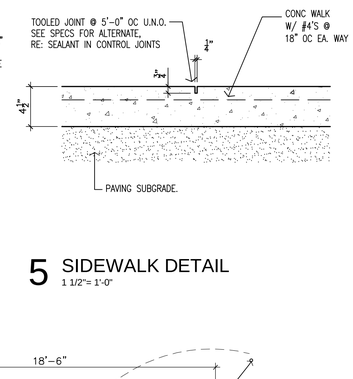
8 DETAIL
1 1/2"= 1'-0"



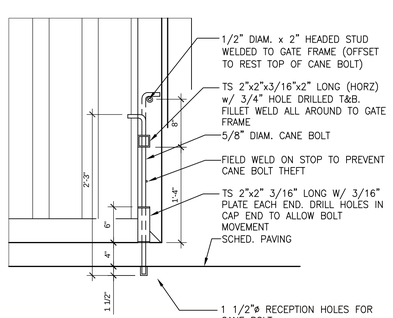
7 DETAIL
1 1/2"= 1'-0"



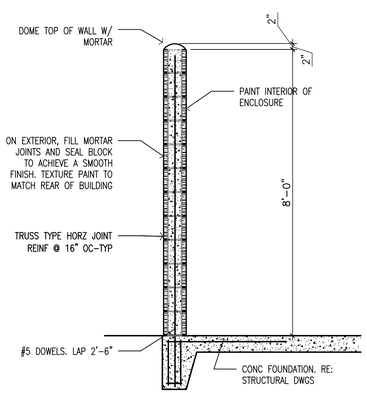
6 SIDEWALK DETAIL
1 1/2"= 1'-0"



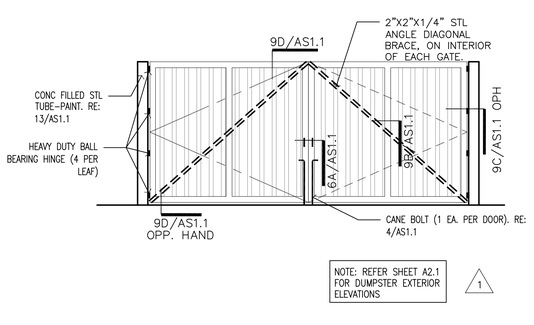
5 SIDEWALK DETAIL
1 1/2"= 1'-0"



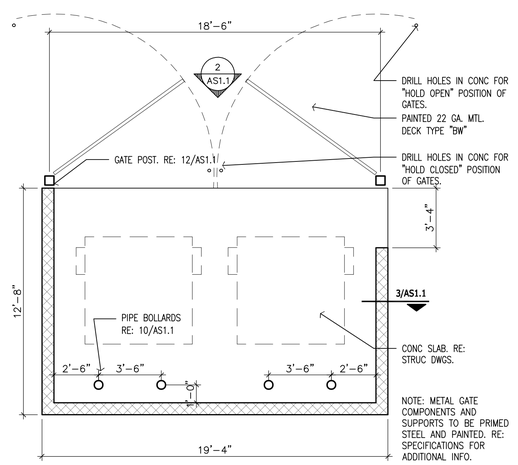
4 CANE BOLT
1"= 1'-0"



3 DUMPSTER WALL
1/2"= 1'-0"



2 DUMPSTER GATE
1/4"= 1'-0"



1 DUMPSTER ENCLOSURE
1/4"= 1'-0"

Date issued/revised

14 SEP 2018 FOR PERMIT & REVIEW
14 NOV 2018 FOR PRICING
15 MAR 2019 FOR PERMIT 1
2 JUL 2019 FOR CONSTRUCTION

AS BUILT
WORKMAN
5/20/2020

OSBORN & VANE ARCHITECTS inc

2000 Bering Drive, Suite 410
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TOWNWEST COMMONS

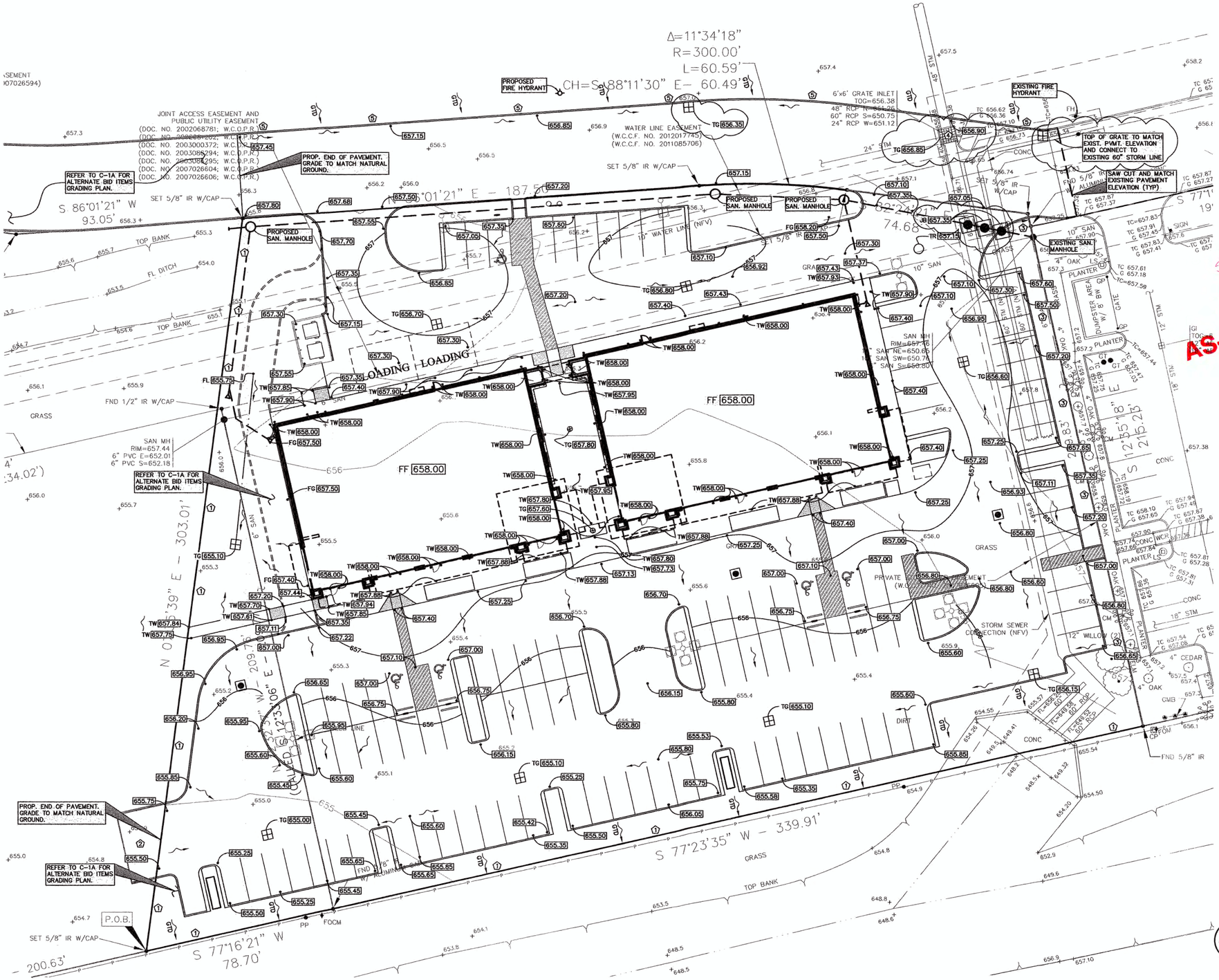
SHELL BUILDING & SITE WORK DEVELOPMENT

OUTPARCEL DEVELOPMENT RETAIL E
NWC STATE HIGHWAY 79 & COUNTRY ROAD 119
HUTTO, TX 78634

Project No.	18064
Drawn	JS
Checked	BS

SITE DETAILS

Sheet No. AS1.1



KEY NOTES:

1. MATCH GRADE AT PROPERTY LINE
2. CONTRACTOR TO OBTAIN OWNER PERMISSION TO GRADE & FILL OUTSIDE PROPERTY.
3. CONTRACTOR TO REPLACE LANDSCAPING DAMAGED DURING CONSTRUCTION.
4. EXISTING INLET TOP TO BE ADJUSTED.
5. FILL AREA TO DRAIN OVER NEW CURB

LEGEND

70.5	EXISTING ELEV.
71.20	TOP OF PAVEMENT
JB 69.80	TOP OF JUNCTION BOX
WSE 69.80	WATER SURFACE ELEVATION
TW 69.80	TOP OF WALK ELEV.
FG 69.80	FINISHED GRADE ELEV.
FF 69.80	FINISHED FLOOR ELEV.
FL 69.80	FLOW LINE ELEV.
TB 69.80	TOP OF BANK
	SQUARE GRATE INLET
	MANHOLE
	JUNCTION BOX
	DRAINAGE FLOW

CONTRACTOR TO FIELD VERIFY ALL CRITICAL EXISTING ELEV'S AND FLOWLINES OF EXISTING STORM SEWER AND SANITARY SEWER BEFORE COMMENCING ANY CONSTRUCTION. CONTACT CIVIL ENGINEER IF CONFLICT EXISTS.

CONTRACTOR TO COORDINATE WITH C-0 TOPOGRAPHIC SURVEY FOR ADDITIONAL ITEMS REMOVED FROM THIS DRAWING FOR CLEARITY.

CONTRACTOR SHALL COORDINATE WITH OWNER, GEOTECHNICAL ENGINEER, AND STRUCTURAL FOR SELECT FILL REQUIREMENTS AND PROCEDURES UNDER BUILDING SLABS. REFER TO SOILS REPORT FOR ALL DESIGN CRITERIA. CONTRACTOR SHALL NOT PROCEDE WITH CONSTRUCTION UNTIL THE REQUIRED SELECT FILL PROCEDURE UNDER BUILDING SLABS HAS BEEN APPROVED.

COORDINATE WITH MEP DRAWINGS FOR ALL LOCATIONS OF GAS OR ELECTRICAL SLEEVES.

ALL EXCAVATION TO BE EITHER HAULED OFF OR IF SPREAD ON SITE, EXISTING DRAINAGE PATTERN TO REMAIN.

ACCORDING TO THE FEDERAL EMERGENCY MANAGEMENT AGENCY'S FLOOD INSURANCE RATE MAP FOR WILLIAMSON COUNTY, TEXAS AND INCORPORATED AREAS, COMMUNITY PANEL NO. 48491—C—0515 E EFFECTIVELY DATED SEPTEMBER 26, 2008, THIS PROPERTY LIES IN ZONE "X", AN AREA DETERMINED TO BE OUTSIDE OF THE 0.2% ANNUAL CHANCE FLOODPLAIN.

ALL SIDEWALKS SHALL HAVE A MAXIMUM CROSS SLOPE OF 2.00% PER ADA REQUIREMENTS.

OWNER TO OBTAIN ALL PERMITS REQUIRED BY THE CITY OF HUTTO, TEXAS, AND ALL GOVERNMENTAL AUTHORITIES WITH JURISDICTION, PRIOR TO STARTING CONSTRUCTION OF UTILITY AND/OR DRIVEWAYS WITHIN PUBLIC RIGHTS OF WAY.

CONTRACTOR TO ASSURE POSITIVE DRAINAGE AROUND ALL ISLANDS TO ALL INLETS.

CONTRACTOR TO OBTAIN ALL PERMITS REQUIRED BY REGULATION OF THE CITY OF HUTTO, TEXAS, FOR FLOOD PLAIN MANGEMENT PRIOR TO STARTING CONSTRUCTION.

CONTRACTOR TO REPLACE ANY SPRINKLER SYSTEM, ELECTRICAL WIRING, PUBLIC & PRIVATE UTILITIES, OR ANY OTHER DAMAGES CAUSED DURING CONSTRUCTION.

CLEAN-OUTS, INLETS AND/OR JUNCTION BOXES LOCATED IN PAVEMENT OR SIDEWALK SHALL HAVE TRAFFIC BEARING LIDS OR GRATES WITH LOAD CLASS E.

COORDINATE WITH ARCHITECT FOR ALL DEMOLITION.

CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING WITH CIVIL DRAINAGE PLAN AND ASSURE POSITIVE DRAINAGE FROM THE BUILDING OVER THE SIDEWALK AND TO THE PARKING LOT. ANY PROBLEMS ENCOUNTERED DURING CONSTRUCTION SHALL BE COORDINATED WITH THE CIVIL ENGINEER BEFORE FINAL CONSTRUCTION. IF LANDSCAPING BEDS ARE ADJACENT TO THE BUILDING, CONTRACTOR SHALL ASSURE THAT DRAINAGE IS NOT BLOCKED. REFER TO TRENCH DRAIN DETAIL IF NEEDED.

CONTRACTOR SHALL ALSO COORDINATE WITH SOILS REPORT FOR ALL REQUIRED FILL, COMPACTION AND LIME STABILIZATION UNDER PROPOSED PAVING SECTIONS.

ALL ISLANDS TO BE RAISED ABOVE TOP OF CURB. FOR DRAINAGE COORDINATE WITH LANDSCAPE DRAWINGS FOR REQUIREMENTS.

C-1 GRADING & DRAINAGE

Scale 1" = 20' JOB: 266-19

SEE SHT C-0 FOR TOPOGRAPHIC SURVEY
SEE SHT C-1 FOR GRADING & DRAINAGE
SEE SHT C-1A FOR GRADING & DRAINAGE (ALTERNATE BID ITEMS)
SEE SHT C-1B FOR DRAINAGE LAYOUT
SEE SHT C-2 FOR STORM SEWER LAYOUT
SEE SHT C-2A FOR STORM SEWER LAYOUT (ALTERNATE BID ITEMS)
SEE SHT C-2B FOR STORM CALCULATION TABLE
SEE SHT C-3 FOR WATER & SANITARY LAYOUT
SEE SHT C-4 FOR PAVING JOINT LAYOUT
SEE SHT C-4A FOR PAVING JOINT LAYOUT (ALTERNATE BID ITEMS)
SEE SHT C-5 FOR SWPPP LAYOUT
SEE SHT C-6 FOR SWPPP NOTES & DETAILS
SEE SHT C-7 FOR GENERAL NOTES & DETAILS
SEE SHT C-8 FOR CITY OF HUTTO NOTES & DETAILS

TEXAS ENGINEERING AND MAPPING CO.
12718 CENTURY DRIVE
STAFFORD, TEXAS 77477
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SURVEYING FIRM NO. 10119000 / ENGINEERING FIRM NO. F-2906
www.team-civil.com

Date issued/revised

14 NOV 18 FOR PRICING
10 DEC 18 SITE PLAN RESUBMITTAL
15 MAR 2019 FOR PERMIT
2 JUL 2019 FOR CONSTRUCTION
1 NOV 2019 BULLETIN #4
11 DEC 2019 INLET ADDITION

AS-BUILTS

stamp per plan

AS-BUILTS

AS-BUILT
WORKMAN
5/26/2020

AS-BUILTS

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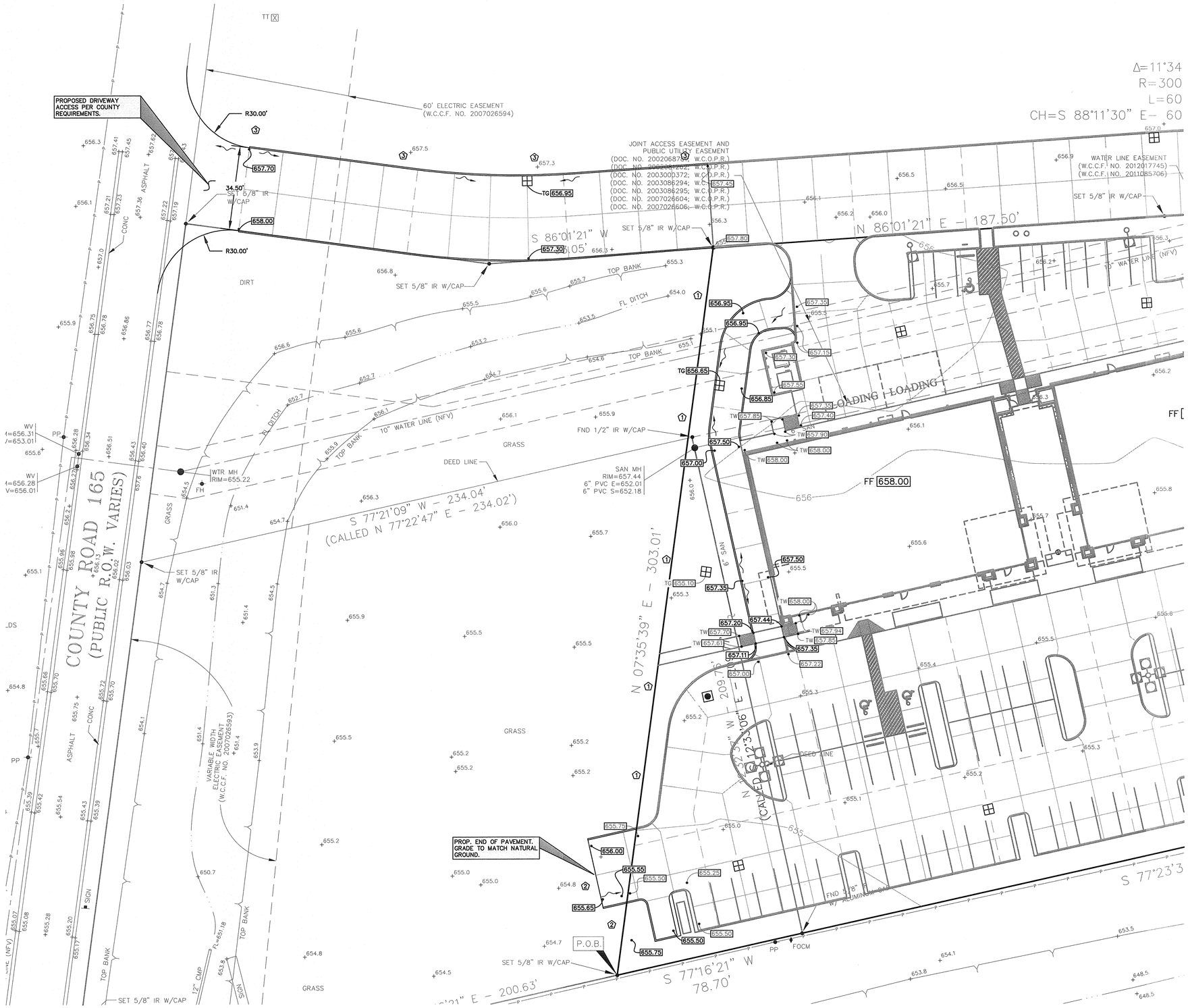
SHELL BUILDING & SITE WORK DEVELOPMENT

720/722 US 79 WEST TOWNWEST COMMONS
HUTTO, TX 78634

Project No.	18064
Drawn	JS
Checked	BS

Sheet No. C-1



GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.

KEY NOTES:

1. MATCH GRADE AT PROPERTY LINE
2. CONTRACTOR TO OBTAIN OWNER PERMISSION TO GRADE & FILL OUTSIDE PROPERTY.
3. FILL AREA TO DRAIN OVER NEW CURB

LEGEND

70.5 +	EXISTING ELEV.
71.20	TOP OF PAVEMENT
JB 69.80	TOP OF JUNCTION BOX
WSE 69.80	WATER SURFACE ELEVATION
TW 69.80	TOP OF WALK ELEV.
FG 69.80	FINISHED GRADE ELEV.
FF 69.80	FINISHED FLOOR ELEV.
FL 69.80	FLOW LINE ELEV.
TB 69.80	TOP OF BANK
⊞	SQUARE GRATE INLET
○	MANHOLE
▣	JUNCTION BOX
~~	DRAINAGE FLOW

GRADING & DRAINAGE ALTERNATE BID ITEMS

C-1A

Scale 1" = 20' *JOB: 266-19*

SEE SHT C-0 FOR TOPOGRAPHIC SURVEY
SEE SHT C-1 FOR GRADING & DRAINAGE
SEE SHT C-1A FOR GRADING & DRAINAGE (ALTERNATE BID ITEMS)
SEE SHT C-1B FOR DRAINAGE LAYOUT
SEE SHT C-2 FOR STORM SEWER LAYOUT
SEE SHT C-2A FOR STORM SEWER LAYOUT (ALTERNATE BID ITEMS)
SEE SHT C-2B FOR STORM CALCULATION TABLE
SEE SHT C-3 FOR WATER & SANITARY LAYOUT
SEE SHT C-4 FOR PAVING JOINT LAYOUT
SEE SHT C-4A FOR PAVING JOINT LAYOUT (ALTERNATE BID ITEMS)
SEE SHT C-5 FOR SWPPP LAYOUT
SEE SHT C-6 FOR SWPPP NOTES & DETAILS
SEE SHT C-7 FOR GENERAL NOTES & DETAILS
SEE SHT C-8 FOR CITY OF HUTTO NOTES & DETAILS

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SURVEYING FIRM NO. 10119000 / ENGINEERING FIRM NO. F-2906
www.team-civil.com

Date issued/revised

14 NOV 18 FOR PRICING
10 DEC 18 SITE PLAN RESUBMITTAL
15 MAR 2019 FOR PERMIT
2 JUL 2019 FOR CONSTRUCTION

AS BUILT
WORKMAN
5/26/2020

OSBORN & VANE ARCHITECTS inc
2000 Bering Drive, Suite 410
Houston, Texas 77057
713 781 6262
Fax 713 781 6347
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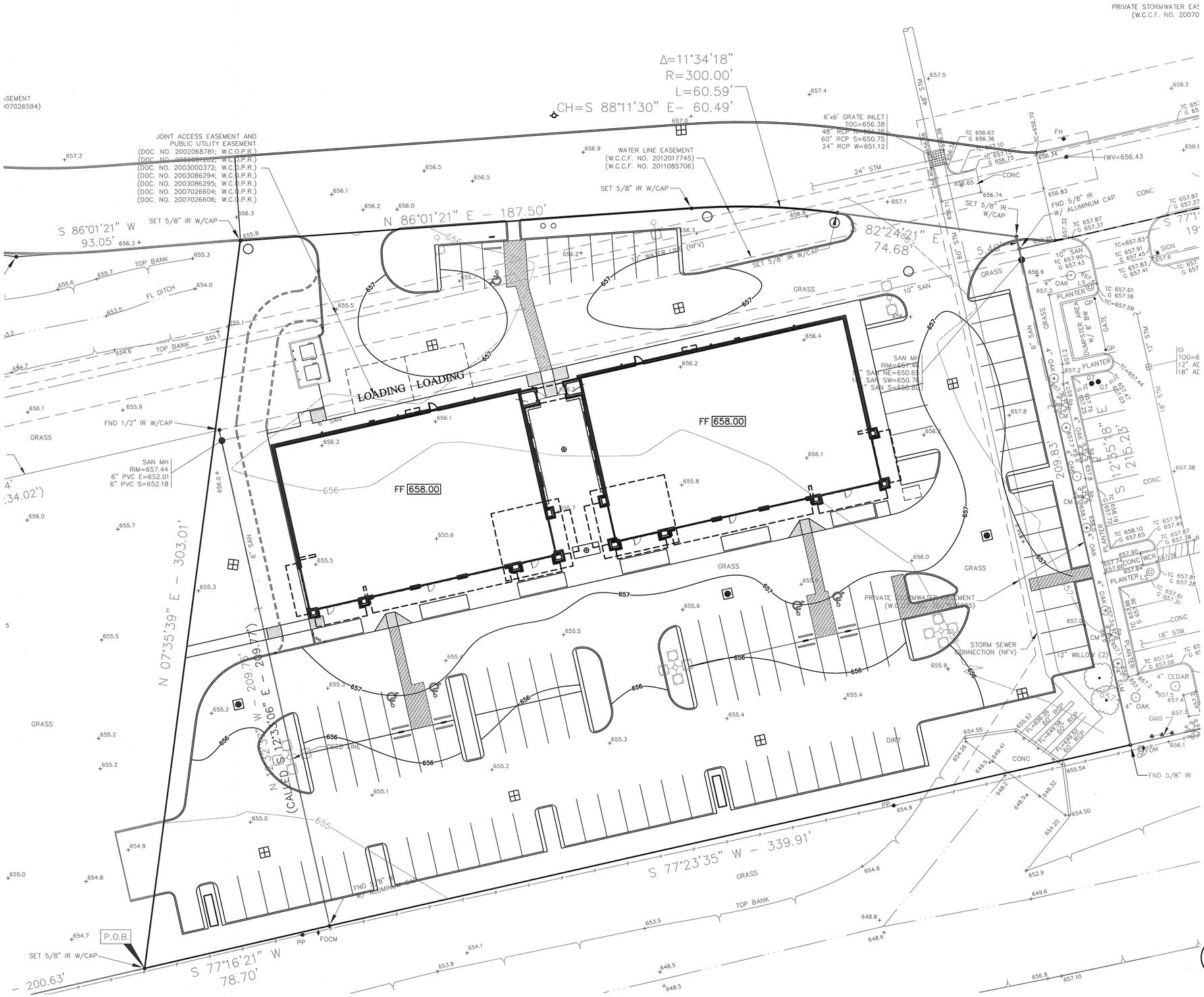
SHELL BUILDING & SITE WORK DEVELOPMENT

720/722 US 79 WEST TOWNWEST COMMONS
HUTTO, TX 78634

Project No.	18064
Drawn	JS
Checked	BS

Sheet No. C-1A



GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.

LEGEND

70.5 +	EXISTING ELEV.
71.20	TOP OF PAVEMENT
JB 69.80	TOP OF JUNCTION BOX
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TW 69.80	TOP OF WALK ELEV.
FG 69.80	FINISHED GRADE ELEV.
FF 69.80	FINISHED FLOOR ELEV.
FL 69.80	FLOW LINE ELEV.
TB 69.80	TOP OF BANK
	SQUARE GRATE INLET
	MANHOLE
	JUNCTION BOX
	DRAINAGE FLOW

CONTRACTOR TO FIELD VERIFY ALL CRITICAL EXISTING ELEV'S AND FLOWLINES OF EXISTING STORM SEWER AND SANITARY SEWER BEFORE COMMENCING ANY CONSTRUCTION. CONTACT CIVIL ENGINEER IF CONFLICT EXISTS.

CONTRACTOR TO COORDINATE WITH C-0 TOPOGRAPHIC SURVEY FOR ADDITIONAL ITEMS REMOVED FROM THIS DRAWING FOR CLEARITY.

CONTRACTOR SHALL COORDINATE WITH OWNER, GEOTECHNICAL ENGINEER, AND STRUCTURAL FOR SELECT FILL REQUIREMENTS AND PROCEDURES UNDER BUILDING SLABS. REFER TO SOILS REPORT FOR ALL DESIGN CRITERIA. CONTRACTOR SHALL NOT PROCEDE WITH CONSTRUCTION UNTIL THE REQUIRED SELECT FILL PROCEDURE UNDER BUILDING SLABS HAS BEEN APPROVED.

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COORDINATE WITH ARCHITECT FOR ALL DEMOLITION.

CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING WITH CIVIL DRAINAGE PLAN AND ASSURE POSITIVE DRAINAGE FROM THE BUILDING OVER THE SIDEWALK AND TO THE PARKING LOT. ANY PROBLEMS ENCOUNTERED DURING CONSTRUCTION SHALL BE COORDINATED WITH THE CIVIL ENGINEER BEFORE FINAL CONSTRUCTION. IF LANDSCAPING BEDS ARE ADJACENT TO THE BUILDING, CONTRACTOR SHALL ASSURE THAT DRAINAGE IS NOT BLOCKED. REFER TO TRENCH DRAIN DETAIL IF NEEDED.

CONTRACTOR SHALL ALSO COORDINATE WITH SOILS REPORT FOR ALL REQUIRED FILL COMPACTION AND LIME STABILIZATION UNDER PROPOSED PAVING SECTIONS.

ALL ISLANDS TO BE RAISED ABOVE TOP OF CURB. FOR DRAINAGE COORDINATE WITH LANDSCAPE DRAWINGS FOR REQUIREMENTS.

C-1B

DRAINAGE LAYOUT

Scale 1" = 20' JOB: 266-19

SEE SHT C-0 FOR TOPOGRAPHIC SURVEY
SEE SHT C-1 FOR GRADING & DRAINAGE
SEE SHT C-1A FOR GRADING & DRAINAGE (ALTERNATE BID ITEMS)
SEE SHT C-1B FOR DRAINAGE LAYOUT
SEE SHT C-2 FOR STORM SEWER LAYOUT
SEE SHT C-2A FOR STORM SEWER LAYOUT (ALTERNATE BID ITEMS)
SEE SHT C-2B FOR STORM CALCULATION TABLE
SEE SHT C-3 FOR WATER & SANITARY LAYOUT
SEE SHT C-4 FOR PAVING JOINT LAYOUT
SEE SHT C-4A FOR PAVING JOINT LAYOUT (ALTERNATE BID ITEMS)
SEE SHT C-5 FOR SWPPP LAYOUT
SEE SHT C-6 FOR SWPPP NOTES & DETAILS
SEE SHT C-7 FOR GENERAL NOTES & DETAILS
SEE SHT C-8 FOR CITY OF HUTTO NOTES & DETAILS

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Date issued/revised

14 NOV 18 FOR PRICING
10 DEC 18 SITE PLAN RESUBMITTAL
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AS-BUILT
WORKMAN
5/26/2020

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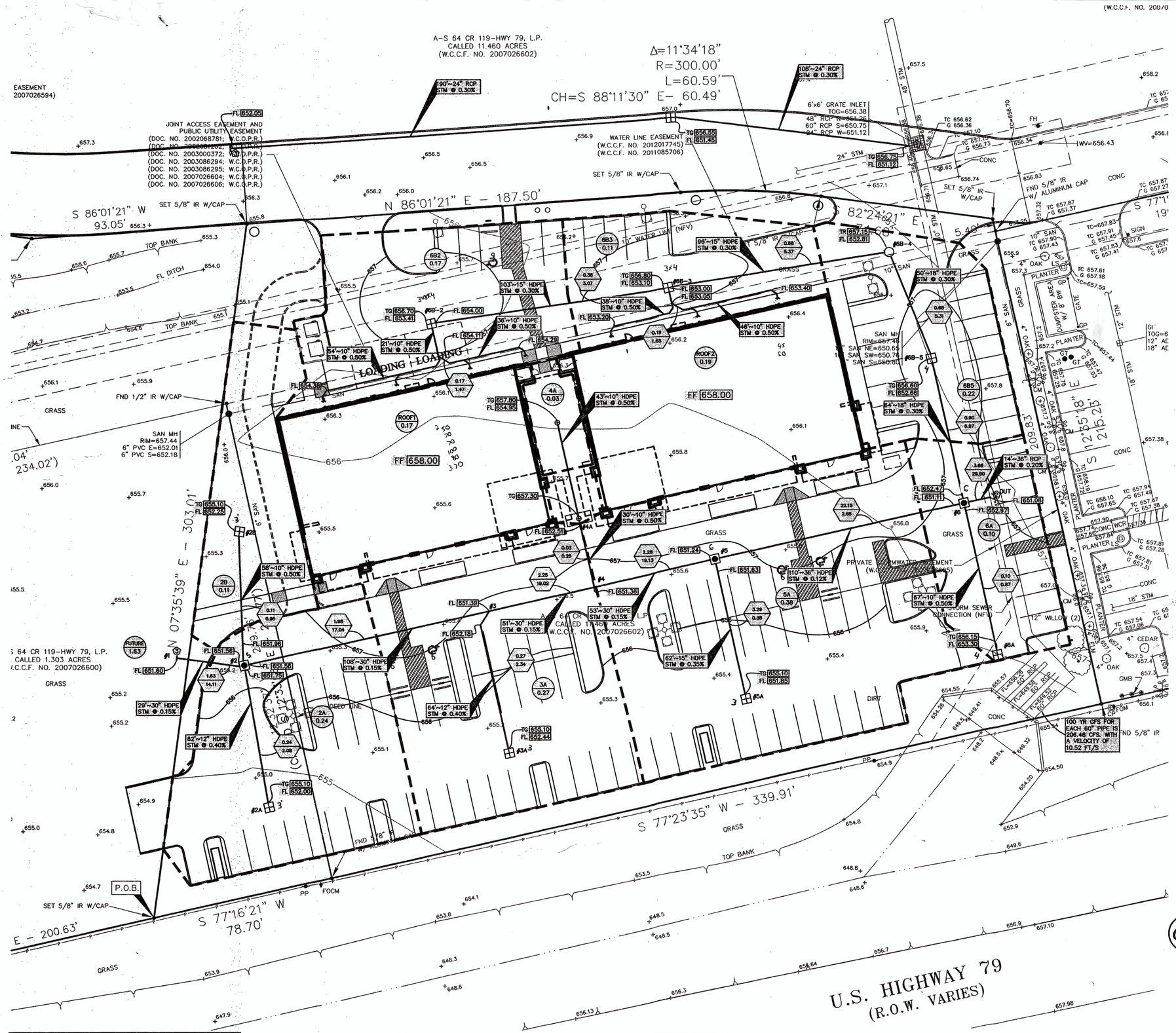
SHELL BUILDING & SITE WORK DEVELOPMENT

720/722 US 79 WEST TOWNWEST COMMONS
HUTTO, TX 78634

Project No.	18064
Drawn	JS
Checked	BS

Sheet No. C-1B



CONTRACTOR TO COORDINATE W/ C-0 TOPOGRAPHIC SURVEY FOR ADDITIONAL ITEMS REMOVED FROM THIS DRAWING FOR CLARITY

ALL SIDEWALKS SHALL HAVE A MAXIMUM CROSS SLOPE OF 2.00% PER ADA REQUIREMENTS.

OWNER TO OBTAIN ALL PERMITS REQUIRED BY CITY OF HUTTO, TEXAS, PRIOR TO STARTING CONSTRUCTION OF UTILITY AND/OR CULVERTS WITHIN WILLIAMSON COUNTY ROAD RIGHTS OF WAY.

CONTRACTOR TO OBTAIN ALL PERMITS REQUIRED BY REGULATION OF CITY OF HUTTO, TEXAS FOR FLOOD PLAIN MANGEMENT PRIOR TO STARTING CONSTRUCTION.

CONTRACTOR TO FIELD VERIFY ALL CRITICAL EXISTING ELEV'S, LOCATION AND FLOWLINES OF EXISTING STORM SEWER & SANITARY SEWER. BEFORE COMMENCING ANY CONSTRUCTION.

COORDINATE WITH ARCHITECT FOR ALL DEMOLITION.

CONTRACTOR SHALL COORDINATE WITH OWNER, GEOTECHNICAL ENGINEER AND STRUCTURAL ENGINEER FOR SELECT FILL REQUIREMENTS AND PROCEDURES UNDER BUILDING SLABS. SEE SOILS REPORT FOR ALL REQUIRED DESIGN CRITERIA. CONTRACTOR SHALL NOT PROCEED WITH CONSTRUCTION UNTIL THE REQUIRED SELECT FILL PROCEDURE UNDER BUILDING SLABS HAS BEEN APPROVED.

CONTRACTOR TO COORDINATE ROOF DRAINS CONNECTIONS WITH MEP AND ARCHITECT.

CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING WITH CIVIL DRAINAGE PLAN AND ASSURE POSITIVE DRAINAGE FROM THE BUILDING OVER THE SIDEWALK AND TO THE PARKING LOT. ANY PROBLEMS ENCOUNTERED DURING CONSTRUCTION SHALL BE COORDINATED WITH THE CIVIL ENGINEER BEFORE FINAL CONSTRUCTION. IF LANDSCAPING BEDS ARE USED ADJACENT TO THE BUILDING CONTRACTOR SHALL ASSURE THAT DRAINAGE IS NOT BLOCKED. REFER TO LANDSCAPE FRENCH DRAIN DETAIL IF NEEDED.

STORM per plan except added 7x7 boxes at sewer crossing

AS-BUILTS

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.

LEGEND

75.5	EXISTING ELEV.
71.20	TOP OF PAVEMENT
TG 69.80	TOP OF GRATE ELEV.
FL 69.80	FLOW LINE ELEV.
FG 69.80	FINISHED GRADE ELEV
TR 69.80	TOP OF RIM ELEV.
JB 69.80	JUNCTION BOX ELEV
	SQUARE GRATE INLET
	JUNCTION BOX
00.00 / 00.00	ACCUMULATIVE ACREAGE / ACCUMULATIVE CFS (25-YR)
00.00 / 00.00	AREA NUMBER / ACREAGE
	DRAINAGE AREA MAP

KEY NOTES:

1. EXISTING INLET TOP OF GRATE TO BE ADJUSTED.
2. CONTRACTOR FIELD VERIFY FLOWLINE ELEVATION OF EXISTING 60" RCP BEFORE COMMENCING WORK UPSTREAM AND ENSURE THAT THERE IS POSITIVE DRAINAGE. CONTACT ENGINEER IF CONFLICT EXISTS.
3. PROVIDE STUB FOR FUTURE CONNECTION.

C-2

STORM SEWER LAYOUT

Scale 1" = 20' JOB: 266-19

SEE SHT C-0 FOR TOPOGRAPHIC SURVEY
SEE SHT C-1 FOR GRADING & DRAINAGE
SEE SHT C-1A FOR GRADING & DRAINAGE (ALTERNATE BID ITEMS)
SEE SHT C-1B FOR DRAINAGE LAYOUT
SEE SHT C-2 FOR STORM SEWER LAYOUT
SEE SHT C-2A FOR STORM SEWER LAYOUT (ALTERNATE BID ITEMS)
SEE SHT C-2B FOR STORM CALCULATION TABLE
SEE SHT C-3 FOR WATER & SANITARY LAYOUT
SEE SHT C-4 FOR PAVING JOINT LAYOUT
SEE SHT C-4A FOR PAVING JOINT LAYOUT (ALTERNATE BID ITEMS)
SEE SHT C-5 FOR SWPPP LAYOUT
SEE SHT C-6 FOR SWPPP NOTES & DETAILS
SEE SHT C-7 FOR GENERAL NOTES & DETAILS
SEE SHT C-8 FOR CITY OF HUTTO NOTES & DETAILS

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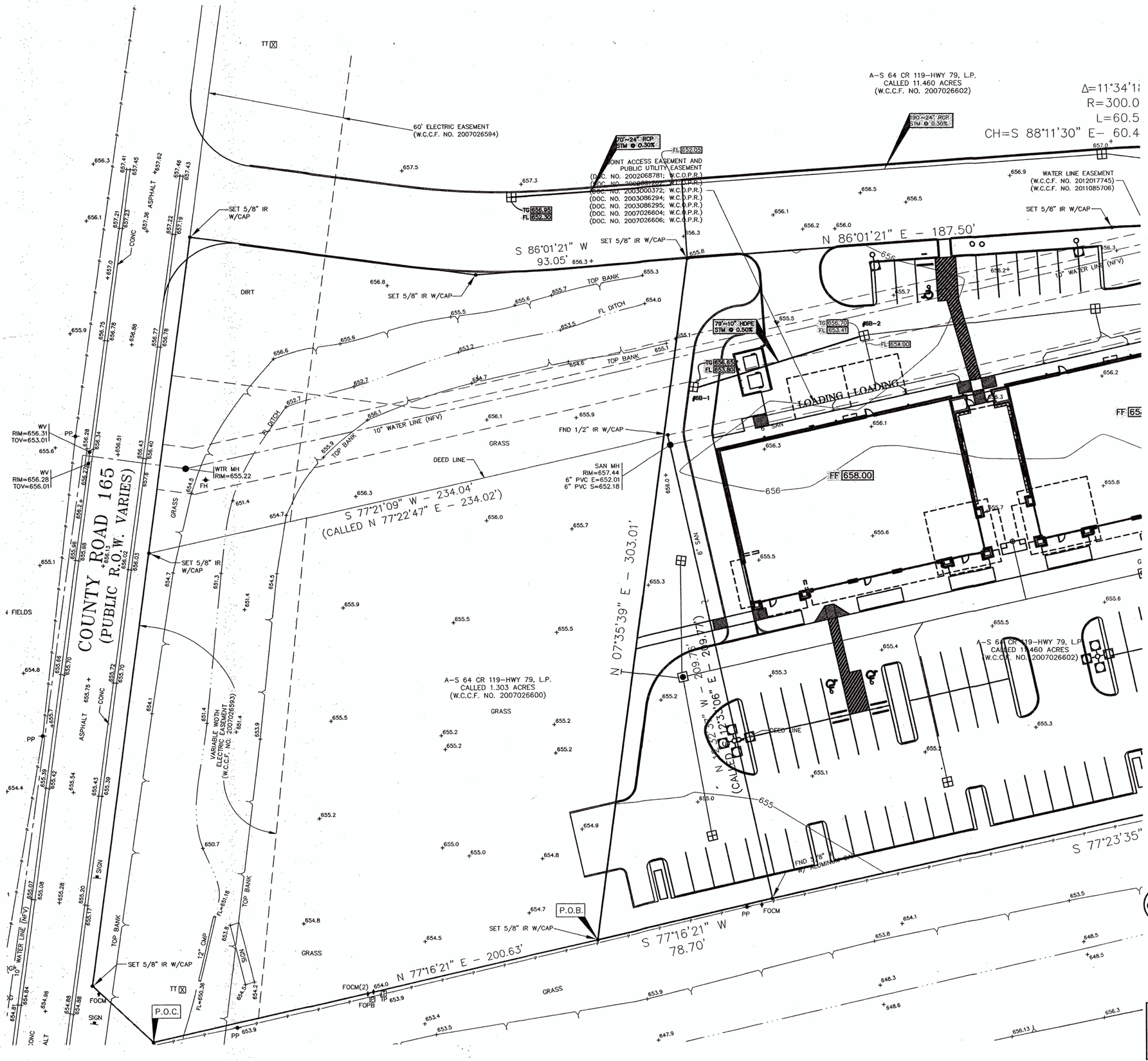
Drawn	JS
Checked	BS

Sheet No. C-2



LEGEND

70.5	EXISTING ELEV.
71.20	TOP OF PAVEMENT
TG 69.60	TOP OF GRATE ELEV.
FL 69.80	FLOW LINE ELEV.
FG 69.80	FINISHED GRADE ELEV
TR 69.80	TOP OF RIM ELEV.
JB 69.80	JUNCTION BOX ELEV
⊞	SQUARE GRATE INLET
⊞	JUNCTION BOX

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.

Storm per plan

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STORM SEWER LAYOUT ALTERNATE BID ITEMS

C-2A

JOB: 266-19

SEE SHT C-0 FOR TOPOGRAPHIC SURVEY
SEE SHT C-1 FOR GRADING & DRAINAGE
SEE SHT C-1A FOR GRADING & DRAINAGE (ALTERNATE BID ITEMS)
SEE SHT C-1B FOR DRAINAGE LAYOUT
SEE SHT C-2 FOR STORM SEWER LAYOUT
SEE SHT C-2A FOR STORM SEWER LAYOUT (ALTERNATE BID ITEMS)
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Sheet No. C-2A

STORM SEWER CALCULATIONS
HUTTO
PROJ # 266-19
25 YR STORM TABLE
PREPARED ON:9-5-18
REVISED ON:

Inlet #	Inlet #	Area No.	Delta Area	ACC Area (acres)	Runoff Coefficient C	C x A	Intensity I (100-yr) (In/Hr)	Sum of Flows (cfs)	Time of C (min)	Pipe Time (min)	Reach Length (ft)	Diameter or Rise (inches)	Hydraulic Area (ft^2)	Hydraulic Radius (ft)	Hydraulic Slope (%)	Hydraulic Mannings "n"	Design Capacity (cfs)	Design Velocity (ft/s)	Fall (ft)	Drop (ft)	Flowline Elevation Upstream (ft)	Top of Pipe Elevation Upstream (ft)	Flowline Elevation Downstream (ft)	Top of Pipe Elevation Downstream (ft)	100 Yr Actual Velocity (ft/s)	Hydraulic Gradient (%)	Change in Head (ft)	Minor Losses (ft)	Elevation of Hyd. Grad. Upstream (ft)	Elevation of Hyd. Grad. Downstream (ft)	Throat Area Required (ft^2)	Inlet size (in)	Throat Area Provided (ft^2)	TG Elevation Upstream (ft)	TG Elevation Downstream (ft)	cover Upstream (ft)	cover Downstream (ft)	Ponding Upstream (ft)	Ponding Downstream (ft)
1	2	1	1.63	1.63	0.88	1.434	9.839	14.11	5.00	0.1681	29	30	4.9087	0.625	0.15	0.011	18.774	3.825	0.044	0.00	651.60	654.10	651.56	654.06	2.875	0.1186	0.0344	0.0642	655.14	655.04	6.55	24	1.40	655.50	656.85	1.40	2.79	-0.36	-1.81
2	3	2	0.00	1.98	0.88	1.742	9.782	17.04	5.17	0.5184	108	30	4.9087	0.625	0.15	0.011	18.774	3.825	0.162	0.00	651.56	654.06	651.39	653.89	3.472	0.1730	0.1868	0.0936	655.04	654.76	0.00	24	1.40	656.85	657.05	2.79	3.16	-1.81	-2.29
3	4	3	0.00	2.25	0.88	1.980	9.608	19.02	5.69	0.2193	51	30	4.9087	0.625	0.15	0.011	18.774	3.825	0.077	0.00	651.39	653.89	651.32	653.82	3.876	0.2155	0.1099	0.1166	654.76	654.54	0.00	24	1.40	657.05	656.95	3.16	3.13	-2.29	-2.41
4	5	4	0.00	2.28	0.88	2.006	9.537	19.13	5.91	0.2266	53	30	4.9087	0.625	0.15	0.011	18.774	3.825	0.08	0.00	651.32	653.82	651.24	653.74	3.898	0.2180	0.1156	0.118	654.54	654.30	0.00	24	1.40	656.95	656.90	3.13	3.16	-2.41	-2.60
5	6	5	0.00	2.66	0.88	2.341	9.465	22.15	6.13	0.5849	110	36	7.0686	0.75	0.12	0.011	27.306	3.863	0.132	0.00	651.24	654.24	651.11	654.11	3.134	0.1105	0.1216	0.0763	654.30	654.11	0.00	24	1.40	656.90	656.92	2.66	2.81	-2.60	-2.81
6	OUT	6	0.00	3.66	0.88	3.221	9.283	29.90	6.72	0.0552	14	36	7.0686	0.75	0.20	0.013	29.828	4.220	0.028	0.00	651.11	654.11	651.08	654.08	4.230	0.2013	0.0282	0.1389	652.67	652.50	0.00	24	1.40	656.92	657.10	2.81	3.02	-4.25	-4.60
2A	2	2A	0.24	0.24	0.88	0.211	9.839	2.08	5.00	0.3905	62	12	0.7854	0.25	0.40	0.011	2.663	3.391	0.248	0.00	652.00	653.00	651.75	652.75	2.646	0.3408	0.2113	0.0544	653.02	652.75	0.97	24	1.40	655.10	656.85	2.10	4.10	-2.08	-4.10
2B	2	2B	0.11	0.11	0.88	0.097	9.839	0.95	5.00	0.5536	58	10	0.5454	0.2083	0.50	0.011	1.831	3.357	0.29	0.00	652.25	653.08	651.96	652.79	1.746	0.1893	0.1098	0.0237	652.93	652.79	0.44	24	1.40	655.10	656.85	2.02	4.06	-2.17	-4.06
3A	3	3A	0.27	0.27	0.88	0.238	9.839	2.34	5.00	0.3584	64	12	0.7854	0.25	0.40	0.011	2.663	3.391	0.256	0.00	652.44	653.44	652.18	653.18	2.977	0.4314	0.2761	0.0688	653.53	653.18	1.09	24	1.40	655.10	657.05	1.66	3.87	-1.57	-3.87
4A	4	4A	0.03	0.03	0.88	0.026	9.839	0.26	5.00	1.0499	30	10	0.5454	0.2083	0.50	0.011	1.831	3.357	0.15	0.00	652.51	653.34	652.36	653.19	0.476	0.0141	0.0042	0.0018	653.20	653.19	0.12	24	1.40	657.30	656.95	3.96	3.76	-4.10	-3.76
5A	5	5A	0.38	0.38	0.88	0.334	9.839	3.29	5.00	0.3854	62	15	1.2272	0.3125	0.35	0.011	4.517	3.680	0.217	0.00	651.85	653.10	651.63	652.88	2.681	0.2599	0.1611	0.0558	653.10	652.88	1.53	24	1.40	655.10	656.90	2.00	4.02	-2.00	-4.02
6A	6	6A	0.10	0.10	0.88	0.088	9.839	0.87	5.00	0.7034	67	10	0.5454	0.2083	0.50	0.011	1.831	3.357	0.335	0.00	653.30	654.13	652.97	653.80	1.588	0.1565	0.1048	0.0196	653.92	653.80	0.40	24	1.40	656.15	656.92	2.02	3.12	-2.23	-3.12
6B1	6B2	6B1	0.04	0.04	0.88	0.035	9.839	0.35	5.00	2.0735	79	10	0.5454	0.2083	0.50	0.011	1.831	3.357	0.395	0.00	653.80	654.63	653.41	654.24	0.635	0.0250	0.0198	0.0031	655.83	655.80	0.16	24	1.40	656.65	656.70	2.02	2.46	-0.82	-0.90
6B2	6B3	6B2	0.17	0.38	0.88	0.334	9.177	3.07	7.07	0.6865	103	15	1.2272	0.3125	0.30	0.011	4.181	3.407	0.309	0.00	653.41	654.66	653.10	654.35	2.501	0.2261	0.2329	0.0486	655.80	655.52	0.64	24	1.40	656.70	656.80	2.05	2.45	-0.90	-1.28
6B3	6B4	6B3	0.11	0.68	0.88	0.598	8.979	5.37	7.76	0.3654	96	15	1.2272	0.3125	0.30	0.011	4.181	3.407	0.288	0.00	653.10	654.35	652.81	654.06	4.378	0.6932	0.6654	0.1488	655.52	654.71	0.40	24	1.40	656.80	656.55	2.45	2.49	-1.28	-1.84
6B4	6B5	6B4	0.00	0.68	0.88	0.598	8.878	5.31	8.13	0.2772	50	18	1.7671	0.375	0.30	0.011	6.800	3.848	0.15	0.00	652.81	654.31	652.66	654.16	3.006	0.2563	0.1281	0.0702	654.71	654.51	0.00	24	1.40	656.55	656.75	2.24	2.59	-1.84	-2.24
6B5	6	6B5	0.22	0.90	0.88	0.792	8.803	6.97	8.40	0.2704	64	18	1.7671	0.375	0.30	0.011	6.800	3.848	0.192	0.00	652.66	654.16	652.47	653.97	3.945	0.4413	0.2825	0.1208	654.51	654.11	0.79	24	1.40	656.75	656.60	2.59	2.63	-2.24	-2.49
6C1	6C	6C1	0.17	0.17	0.88	0.150	9.839	1.47	5.00	0.1297	21	10	0.5454	0.2083	0.50	0.011	1.831	3.357	0.105	0.00	652.10	652.93	652.00	652.83	2.699	0.4522	0.095	0.0565	655.67	655.52	0.68	24	1.40	656.95	656.55	4.02	3.72	-1.28	-1.03
6D1	6D	6D1	0.19	0.19	0.88	0.167	9.839	1.65	5.00	0.0332	6	10	0.5454	0.2083	0.50	0.011	1.831	3.357	0.03	0.00	651.52	652.35	651.49	652.32	3.016	0.5648	0.0339	0.0706	654.81	654.71	0.76	24	1.40	657.02	656.55	4.67	4.23	-2.21	-1.84
6D1	6D	6D1	0.19	0.19	0.88	0.167	9.839	1.65	5.00	9.4845	298	24	3.1416	0.5	0.30	0.013	12.391	3.944	0.894	0.00	651.52	653.52	650.63	652.63	0.524	0.0053	0.0158	0.0021	654.77	654.75	0.76	24	1.40	657.02	656.55	3.50	3.92	-2.25	-1.80

STATE OF TEXAS
CHAD A. NESVADBA
91092
LICENSED
PROFESSIONAL ENGINEER
7/2/19

STORM SEWER CALCULATION TABLE

C-2B

Scale 1" = 20' *JOB: 266-19*

SEE SHT C-0 FOR TOPOGRAPHIC SURVEY
SEE SHT C-1 FOR GRADING & DRAINAGE
SEE SHT C-1A FOR GRADING & DRAINAGE (ALTERNATE BID ITEMS)
SEE SHT C-1B FOR DRAINAGE LAYOUT
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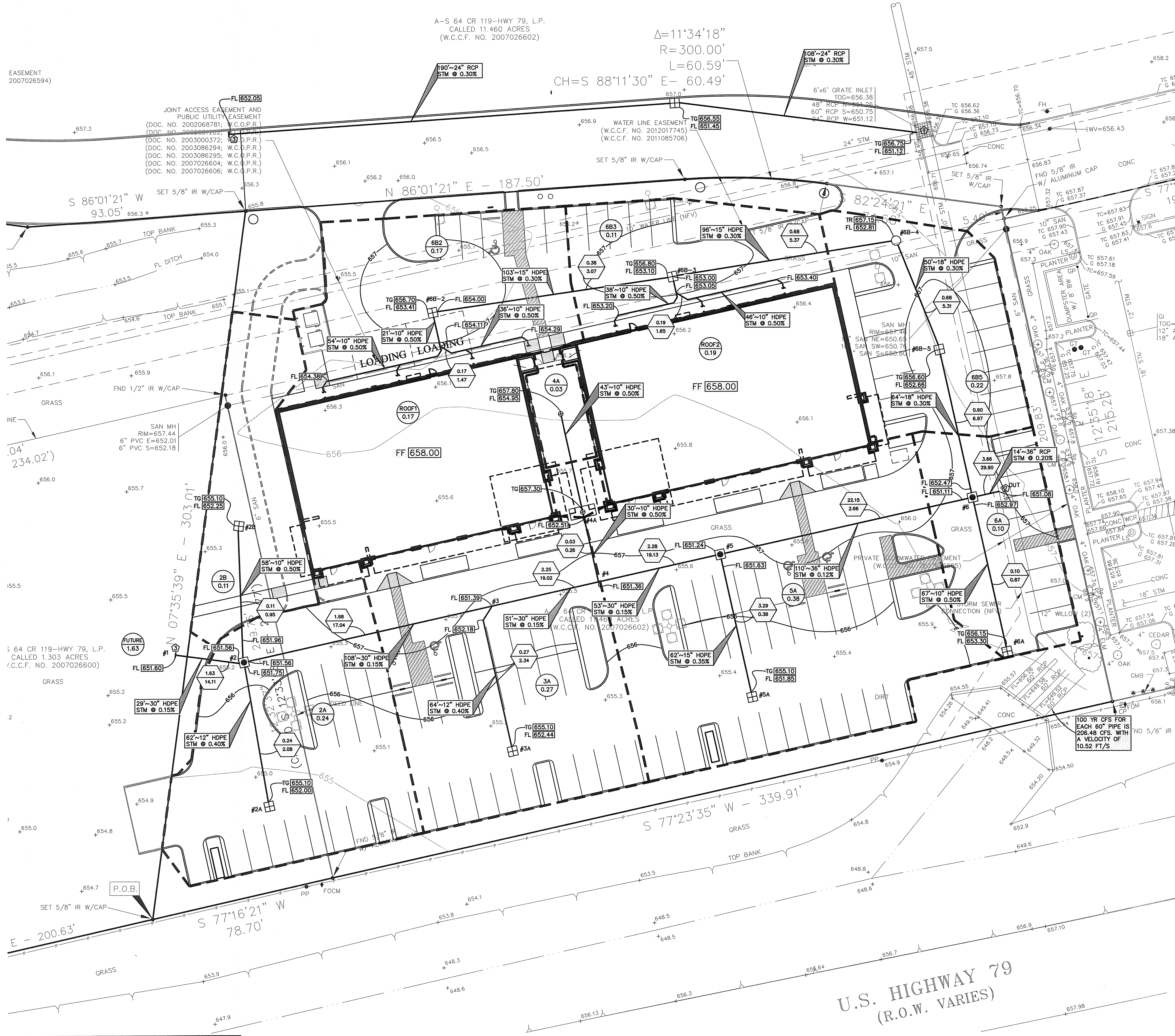

CONTRACTOR TO COORDINATE W/ C-0 TOPOGRAPHIC SURVEY FOR ADDITIONAL ITEMS REMOVED FROM THIS DRAWING FOR CLARITY

ALL SIDEWALKS SHALL HAVE A MAXIMUM CROSS SLOPE OF 2.00% PER ADA REQUIREMENTS.

OWNER TO OBTAIN ALL PERMITS REQUIRED BY CITY OF HUTTO, TEXAS, PRIOR TO STARTING CONSTRUCTION OF UTILITY AND/OR CULVERTS WITHIN WILLIAMSON COUNTY ROAD RIGHTS OF WAY.

CONTRACTOR TO OBTAIN ALL PERMITS REQUIRED BY REGULATION OF CITY OF HUTTO, TEXAS FOR FLOOD PLAIN MANGEMENT PRIOR TO STARTING CONSTRUCTION.

CONTRACTOR TO FIELD VERIFY ALL CRITICAL EXISTING ELEV'S, LOCATION AND FLOWLINES OF EXISTING STORM SEWER & SANITARY SEWER. BEFORE COMMENCING ANY CONSTRUCTION.

COORDINATE WITH ARCHITECT FOR ALL DEMOLITION.

CONTRACTOR SHALL COORDINATE WITH OWNER, GEOTECHNICAL ENGINEER AND STRUCTURAL ENGINEER FOR SELECT FILL REQUIREMENTS AND PROCEDURES UNDER BUILDING SLABS. SEE SOILS REPORT FOR ALL REQUIRED DESIGN CRITERIA. CONTRACTOR SHALL NOT PROCEED WITH CONSTRUCTION UNTIL THE REQUIRED SELECT FILL PROCEDURE UNDER BUILDING SLABS HAS BEEN APPROVED.

CONTRACTOR TO COORDINATE ROOF DRAINS CONNECTIONS WITH MEP AND ARCHITECT.

CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING WITH CIVIL DRAINAGE PLAN AND ASSURE POSITIVE DRAINAGE FROM THE BUILDING OVER THE SIDEWALK AND TO THE PARKING LOT. ANY PROBLEMS ENCOUNTERED DURING CONSTRUCTION SHALL BE COORDINATED WITH THE CIVIL ENGINEER BEFORE FINAL CONSTRUCTION. IF LANDSCAPING BEDS ARE USED ADJACENT TO THE BUILDING CONTRACTOR SHALL ASSURE THAT DRAINAGE IS NOT BLOCKED. REFER TO LANDSCAPE FRENCH DRAIN DETAIL IF NEEDED.

LEGEND

70.5 +	EXISTING ELEV.
71.20	TOP OF PAVEMENT
TG 69.80	TOP OF GRATE ELEV.
FL 69.80	FLOW LINE ELEV.
FG 69.80	FINISHED GRADE ELEV
TR 69.80	TOP OF RIM ELEV.
JB 69.80	JUNCTION BOX ELEV
⊞	SQUARE GRATE INLET
▣	JUNCTION BOX
00.00 / 00.00 (hexagon)	ACCUMULATIVE ACREAGE / ACCUMULATIVE CFS (25-YR)
00.00 / 00.00 (circle)	AREA NUMBER / ACREAGE
— —	DRAINAGE AREA MAP

KEY NOTES:

1. EXISTING INLET TOP OF GRATE TO BE ADJUSTED.
2. CONTRACTOR FIELD VERIFY FLOWLINE ELEVATION OF EXISTING 60" RCP BEFORE COMMENNCING WORK UPSTREAM AND ENSURE THAT THERE IS POSITIVE DRAINAGE. CONTACT ENGINEER IF CONFLICT EXISTS.
3. PROVIDE STUB FOR FUTURE CONNECTION.

C-2 STORM SEWER LAYOUT

Scale 1" = 20' *JOB: 266-19*

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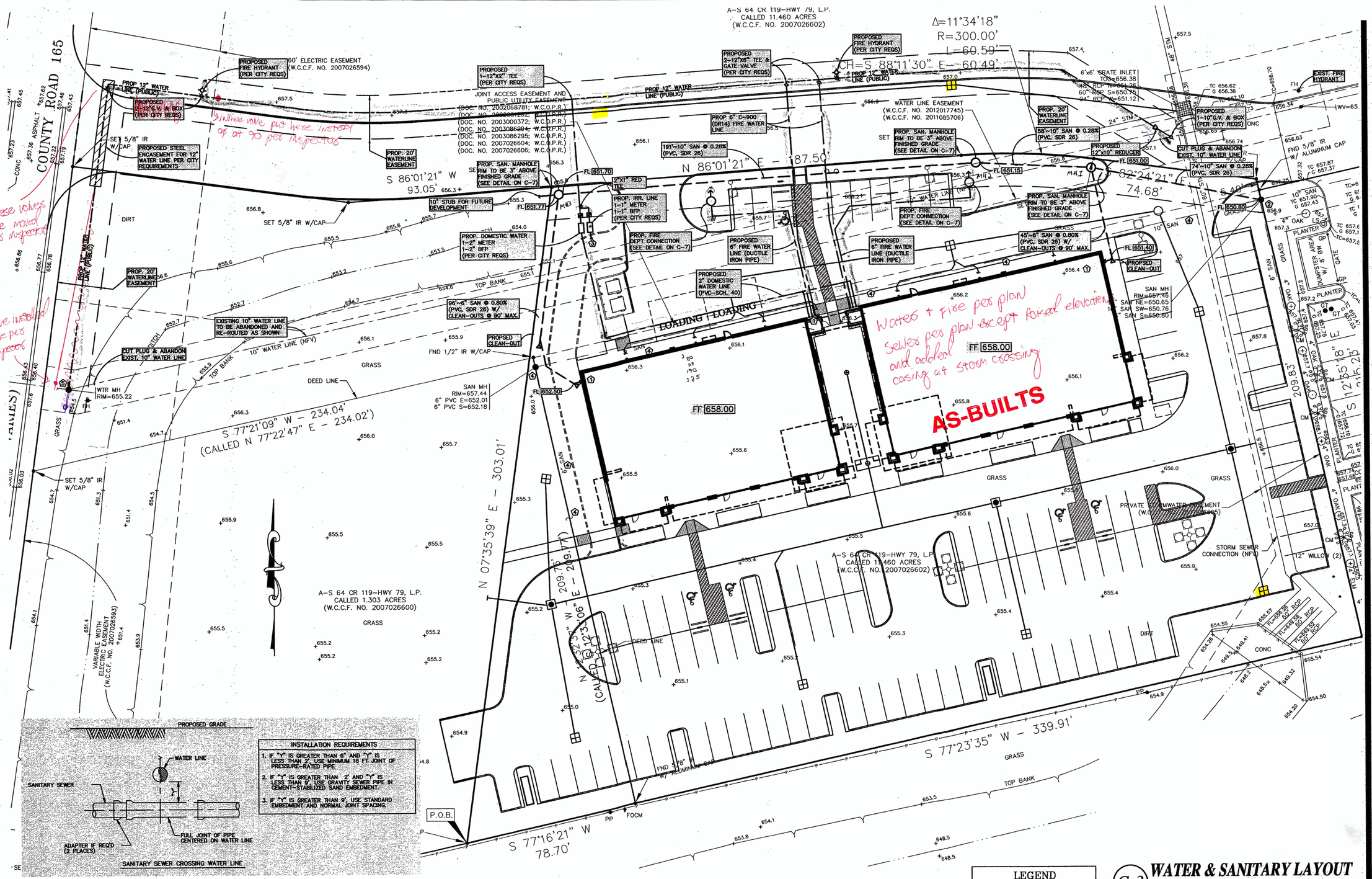

INSTALLATION REQUIREMENTS

1. IF "Y" IS GREATER THAN 6' AND "Y" IS LESS THAN 2', USE MINIMUM 18 FT JOINT OF PRESSURE-RATED PIPE.
2. IF "Y" IS GREATER THAN 2' AND "Y" IS LESS THAN 9', USE GRAVITY SEWER PIPE IN CEMENT-STABILIZED SAND EMBEDMENT.
3. IF "Y" IS GREATER THAN 9', USE STANDARD EMBEDMENT AND NORMAL JOINT SPACING.

- NO CONSTRUCTION OF COMBUSTIBLE MATERIALS SHALL TAKE PLACE UNTIL ALL FIRE HYDRANTS ARE INSTALLED AND OPERATIONAL.
- OWNER TO OBTAIN ALL PERMITS REQUIRED BY WILLIAMSON COUNTY, TEXAS, & TXDOT PRIOR TO STARTING CONSTRUCTION OF UTILITY AND/OR CULVERTS WITHIN CITY & TXDOT ROAD RIGHTS OF WAY.
- CONTRACTOR TO OBTAIN ALL PERMITS REQUIRED BY REGULATION OF WILLIAMSON COUNTY, TEXAS, FOR FLOOD PLAIN MANGEMENT PRIOR TO STARTING CONSTRUCTION.
- CONTRACTOR TO FIELD VERIFY ALL CRITICAL EXISTING ELEV'S, LOCATION AND FLOWLINES OF EXISTING STORM SEWER AND SANITARY SEWER. BEFORE COMMENCING ANY CONSTRUCTION.
- CONTRACTOR TO COORDINATE WITH MUD OPERATOR FOR ALL SANITARY AND WATER REQUIREMENTS, INSPECTIONS, FEES, ETC., INCLUDING LOCATING UNDERGROUND UTILITIES TO PREVENT ANY DAMAGE TO EXISTING UTILITIES.
- PUBLIC UTILITY LINES TO BE INSPECTED BY CITY CONSTRUCTION INSPECTION TEAM. CONTRACTOR TO COORD WITH CITY.
- CLEAN-OUTS, INLETS AND/OR JUNCTION BOXES LOCATED IN PAVEMENT OR SIDEWALK SHALL HAVE TRAFFIC BEARING LIDS OR GRATES.
- CONTRACTOR SHALL DETERMINE IF CONFLICT EXISTS AT ALL UTILITY CROSSINGS PRIOR TO STARTING CONSTRUCTION AND REPORT ANY CONFLICT TO ENGINEER IMMEDIATELY.
- CONTRACTOR TO REPLACE ANY SPRINKLER SYSTEM, ELECTRICAL WIRING, PUBLIC & PRIVATE UTILITIES, OR ANY OTHER DAMAGES CAUSED DURING CONSTRUCTION.
- ALL WATER AND SANITARY SEWER CONNECTIONS TO THE DISTRICT'S FACILITIES SHALL BE IN ACCORDANCE WITH THE DISTRICT'S RATE ORDER.
- COORDINATE WITH OWNER FOR ALL DEMOLITION.

KEY NOTES:

1. COORDINATE WITH ARCHITECT AND MEP PLANS FOR CONTINUATION OF LINE INTO BUILDING.
2. CONNECT TO EXISTING SANITARY SEWER (NFV). CONTRACTOR TO VERIFY FL BEFORE BEGINNING CONSTRUCTION.
3. COORDINATE WITH LANDSCAPE ARCHITECT FOR CONTINUATION OF 1" IRRIGATION LINE
4. EXISTING SANITARY MANHOLE AND SANITARY LINE TO BE REMOVED
5. CONTRACTOR TO VERIFY AND COORD CONNECTION WITH CITY.

DRIVE THRU OPTION TO BE ALTERNATE BID ITEM, COORDINATE WITH ARCHITECT.

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.

LEGEND

- 70.5 EXISTING ELEV.
- 71.20 TOP OF PAVEMENT
- TG 69.80 TOP OF GRATE ELEV.
- FL 69.80 FLOW LINE ELEV.
- FG 69.80 FINISHED GRADE ELEV
- TR 69.80 TOP OF RIM ELEV.
- JB 69.80 JUNCTION BOX ELEV
- SQUARE GRATE INLET
- JUNCTION BOX
- WATER METER
- SANITARY CLEAN-OUT
- SANITARY LINE
- WATER LINE
- BACKFLOW PREVENTER

C-3 WATER & SANITARY LAYOUT

Scale 1" = 20' JOB: 266-19

SEE SHT C-0 FOR TOPOGRAPHIC SURVEY
SEE SHT C-1 FOR GRADING & DRAINAGE
SEE SHT C-1A FOR GRADING & DRAINAGE (ALTERNATE BID ITEMS)
SEE SHT C-1B FOR DRAINAGE LAYOUT
SEE SHT C-2 FOR STORM SEWER LAYOUT
SEE SHT C-2A FOR STORM SEWER LAYOUT (ALTERNATE BID ITEMS)
SEE SHT C-2B FOR STORM CALCULATION TABLE
SEE SHT C-3 FOR WATER & SANITARY LAYOUT
SEE SHT C-4 FOR PAVING JOINT LAYOUT
SEE SHT C-4A FOR PAVING JOINT LAYOUT (ALTERNATE BID ITEMS)
SEE SHT C-5 FOR SWPPP LAYOUT
SEE SHT C-6 FOR SWPPP NOTES & DETAILS
SEE SHT C-7 FOR GENERAL NOTES & DETAILS
SEE SHT C-8 FOR CITY OF HUTTO NOTES & DETAILS

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AS-BUILTS

AS BUILT WORKMAN 5/26/2020

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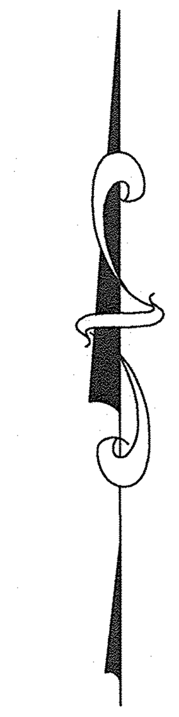
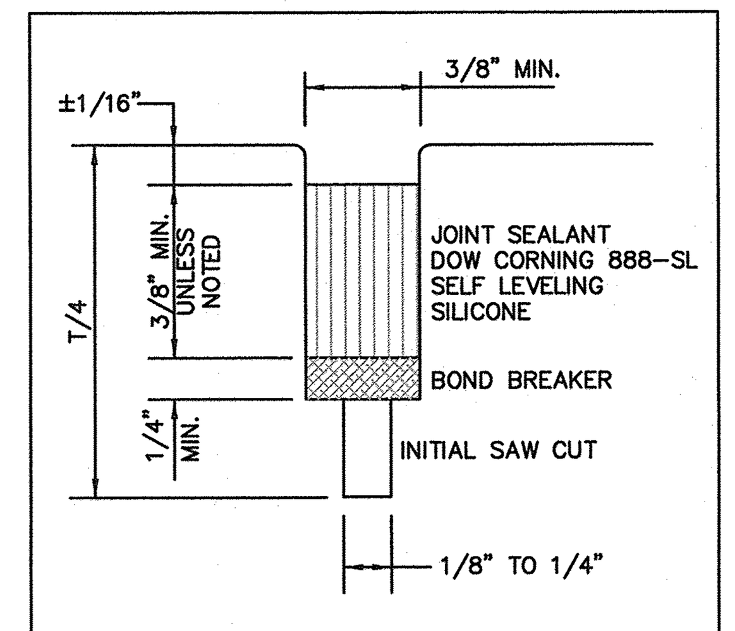
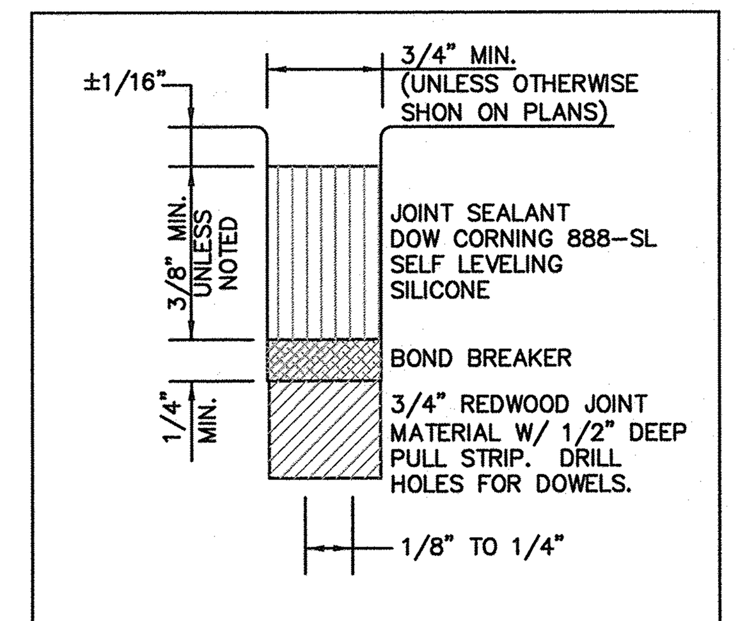




SAW CUT CONTROL JOINT DETAIL
N.T.S.



EXPANSION JOINT DETAIL
N.T.S.

LEGEND

- EXISTING ELEV.
- SQUARE GRATE INLET
- JUNCTION BOX
- EXPANSION JOINT
- CONTROL OR CONSTRUCTION JOINT
- 5" THICK CONCRETE PAVEMENT
- 6" THICK CONCRETE PAVEMENT
- 7" THICK CONCRETE PAVEMENT

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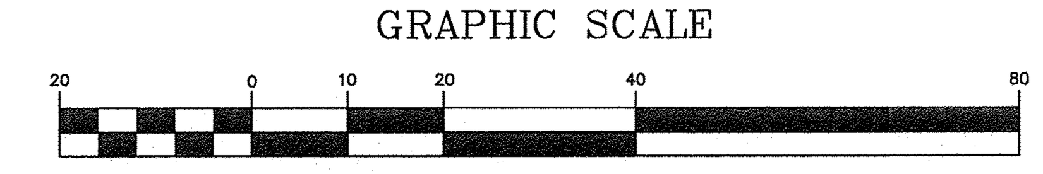
PAVING JOINT LAYOUT ALTERNATE BID ITEMS

C-4A

Scale 1" = 20' JOB: 266-19

SEE SHT C-0 FOR TOPOGRAPHIC SURVEY
SEE SHT C-1 FOR GRADING & DRAINAGE
SEE SHT C-1A FOR GRADING & DRAINAGE (ALTERNATE BID ITEMS)
SEE SHT C-1B FOR DRAINAGE LAYOUT
SEE SHT C-2 FOR STORM SEWER LAYOUT
SEE SHT C-2A FOR STORM SEWER LAYOUT (ALTERNATE BID ITEMS)
SEE SHT C-2B FOR STORM CALCULATION TABLE
SEE SHT C-3 FOR WATER & SANITARY LAYOUT
SEE SHT C-4 FOR PAVING JOINT LAYOUT
SEE SHT C-4A FOR PAVING JOINT LAYOUT (ALTERNATE BID ITEMS)
SEE SHT C-5 FOR SWPPP LAYOUT
SEE SHT C-6 FOR SWPPP NOTES & DETAILS
SEE SHT C-7 FOR GENERAL NOTES & DETAILS
SEE SHT C-8 FOR CITY OF HUTTO NOTES & DETAILS

GRAPHIC SCALE



(IN FEET)
1 inch = 20 ft.

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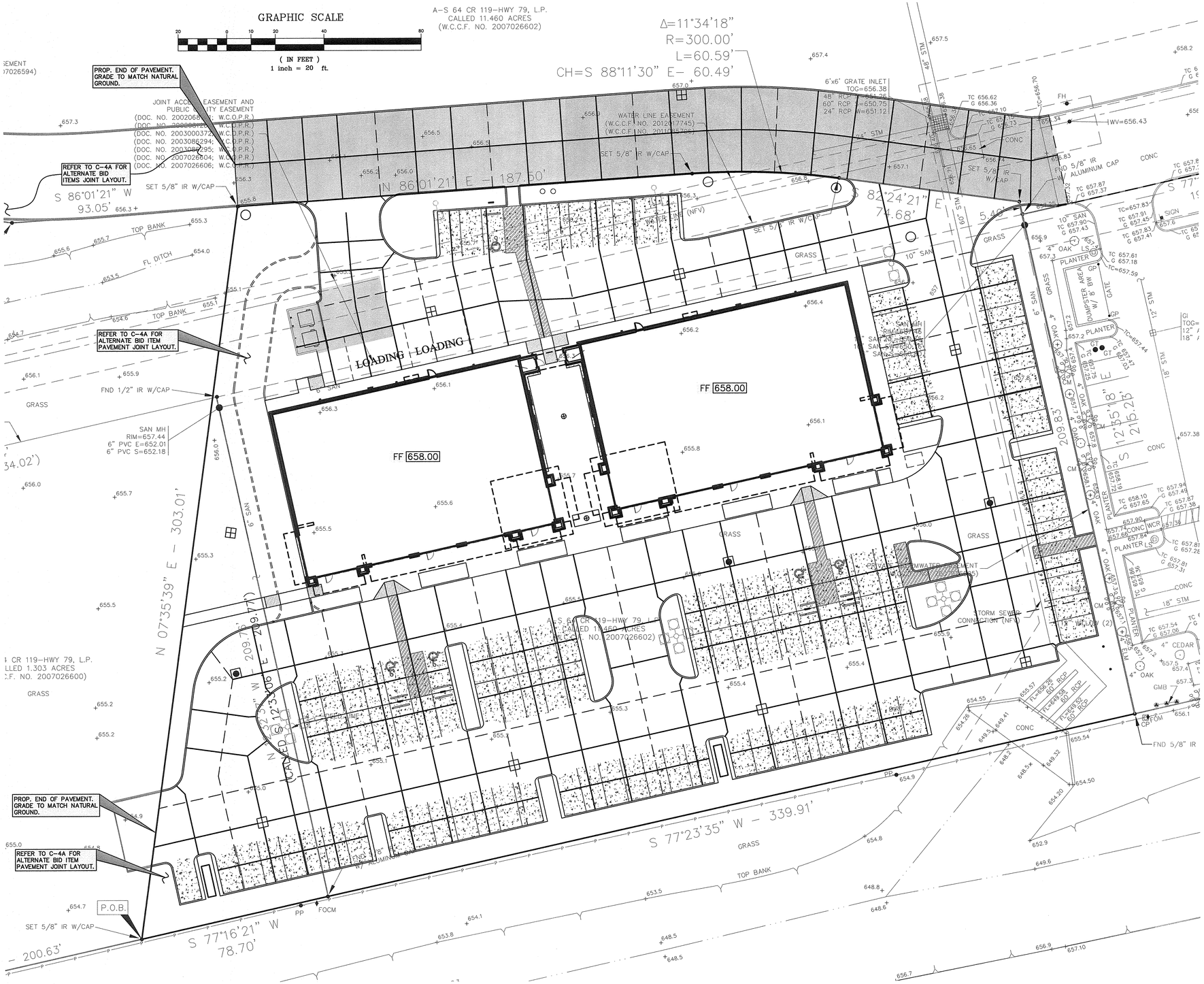
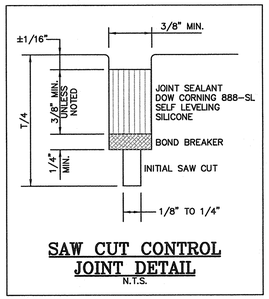
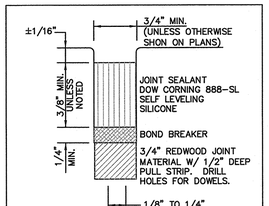




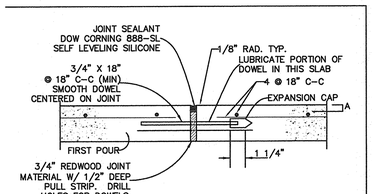
SAW CUT CONTROL JOINT DETAIL
N.T.S.



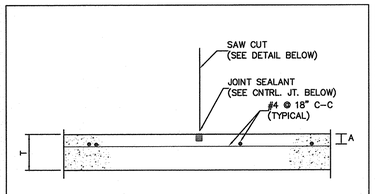
EXPANSION JOINT DETAIL
N.T.S.

LEGEND

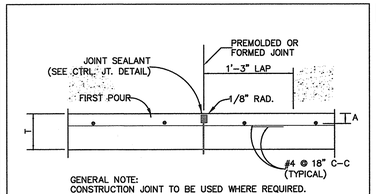
- EXISTING ELEV.
- SQUARE GRATE INLET
- JUNCTION BOX
- EXPANSION JOINT
- CONTROL OR CONSTRUCTION JOINT
- 5" THICK CONCRETE PAVEMENT
- 6" THICK CONCRETE PAVEMENT
- 7" THICK CONCRETE PAVEMENT



EXPANSION JOINT
N.T.S.



CONTROL JOINT
N.T.S.



GENERAL NOTE:
CONSTRUCTION JOINT TO BE USED WHERE REQUIRED. (NOT TO REPLACE EXPANSION JOINT)

CONSTRUCTION JOINT
N.T.S.

SCHEDULE

SLAB THICK "T" (IN.)	COVER "A" (IN.)
5	2
6	2
7	2 3/8

- COORDINATE WITH LANDSCAPE ARCHITECT FOR LOCATION OF IRRIGATION SLEEVES.
- ALL PAVING, FILL COMPACTION AND SUBGRADE PREPARATION SHALL BE IN ACCORDANCE WITH SOIL REPORT SPECIFICATIONS.
- ALL PAVEMENT JOINTS SHALL AUGN WITH ALL CURB JOINTS. ALL CURB JOINTS SHALL BE SEALED WITH JOINT SEALANT.
- REFER TO SOILS REPORT RECOMMENDATION FOR LIME STABILIZED SUBGRADE AND COMPACTION REQUIRED UNDER PAVEMENT (IF APPLICABLE).
- CONTRACTOR IS RESPONSIBLE FOR THE PLACEMENT OF EXPANSION & CONTROL JOINTS IN THE PAVING. EXPANSION JOINTS TO BE PLACED @ A MAX. OF 60' C-C & CONTROL JOINTS TO BE PLACED @ A MAX. OF 15' C-C. (SEE DETAILS FOR JOINT REQUIREMENTS)

C-4 PAVING JOINT LAYOUT

Scale 1" = 20' JOB: 266-19

SEE SHT C-0 FOR TOPOGRAPHIC SURVEY
SEE SHT C-1 FOR GRADING & DRAINAGE
SEE SHT C-1A FOR GRADING & DRAINAGE (ALTERNATE BID ITEMS)
SEE SHT C-1B FOR DRAINAGE LAYOUT
SEE SHT C-2 FOR STORM SEWER LAYOUT
SEE SHT C-2A FOR STORM SEWER LAYOUT (ALTERNATE BID ITEMS)
SEE SHT C-2B FOR STORM CALCULATION TABLE
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SEE SHT C-4 FOR PAVING JOINT LAYOUT
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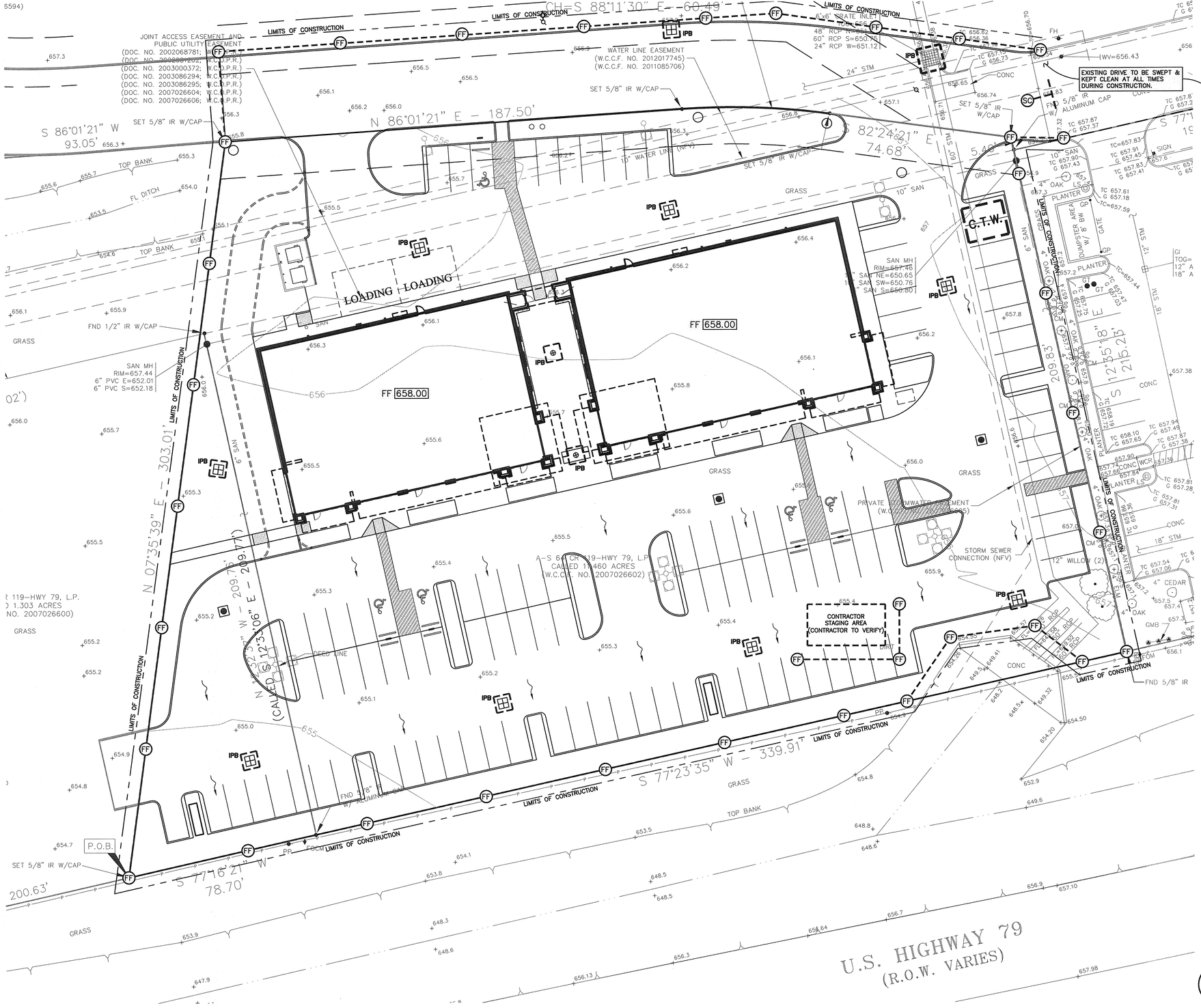

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.

CONTRACTOR TO ENSURE THAT ALL DONWSTREAM EDGES OF THE PROPERTY ARE PROTECTED WITH AN ENVIRONMENTAL CONTROL DEVICE DURING ALL PHASES OF CONSTRUCTION.

CONTRACTOR TO PROVIDE CONCRETE WASHOUT FOR ALL PROPOSED CONCRETE WORK. LOCATION OF CONCRETE WASHOUT SHALL BE ONSITE AND APPROVED BY THE CITY INSPECTOR PRIOR TO USE.

REFER TO SWPPP REPORT FOR MORE INFORMATION.

CONTRACTOR TO PROTECT EXISTING INLETS AT ALL TIME DURING CONSTRUCTION.

CONTRACTOR TO COMPLY WITH ALL TCEQ REQUIREMENTS FOR SWPPP PLAN INCLUDING SUBMITTAL OF N.O.I. WHEN REQUIRED.

DRIVE THRU OPTION TO BE ALTERNATE BID ITEM, COORDINATE WITH ARCHITECT.

LEGEND

- FF — FILTER FABRIC FENCE
- IPB — INLET PROTECTION BARRIER (GRATE INLET)
- SC — STABILIZED CONSTRUCTION ENTRANCE (LOCATION TO BE CONFIRMED BY CONTRACTOR)
- C.T.W. — CONCRETE TRUCK WASHOUT AREA (LOCATION TO BE CONFIRMED BY CONTRACTOR)

C-5 SWPPP LAYOUT

Scale 1" = 20' JOB: 266-19

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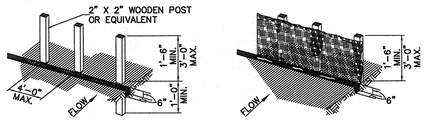
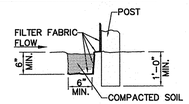
Sheet No. C-5

1. SET POSTS AT REQUIRED SPACING AND DEPTH. EXCAVATE A 6" X 6" TRENCH UPSLOPE ALONG THE LINE OF POSTS.

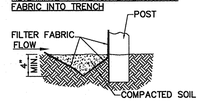
2. ATTACH FILTER FABRIC TO POSTS AND INSTALL IT INTO THE TRENCH. BACKFILL THE TRENCH AND COMPACT THE EXCAVATED SOIL.



EXTENSION OF FABRIC INTO TRENCH



ALTERNATE V-TRENCH EXTENSION OF FABRIC INTO TRENCH



GENERAL NOTES:

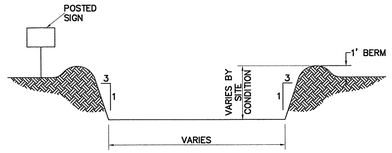
1. SET POSTS AT 4-FEET MAXIMUM SPACING. IF FACTORY PRE ASSEMBLED FENCE WITH SUPPORT NETTING IS USED, SPACING OF POST MAY BE INCREASED TO 8 FEET MAXIMUM.

2. WHEN TWO SECTIONS OF FILTER FABRIC ADJOIN EACH OTHER, OVERLAP 6 INCHES AT THE POST, FOLD TOGETHER, AND ATTACH TO THE POSTS.

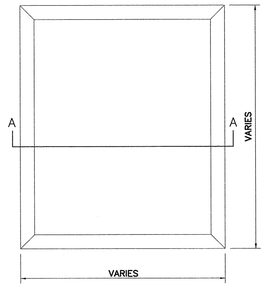
3. REMOVE SEDIMENT DEPOSITS WHEN SILT DEPTH REACHES ONE-THIRD OF THE HEIGHT OF THE FENCE.

FILTER FABRIC BARRIER

SYMBOL



SECTION A-A
N.T.S.



PLAN VIEW
N.T.S.

GENERAL NOTES:

1. POST A SIGN READING "CONCRETE WASH OUT 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 NO WHERE ELSE.

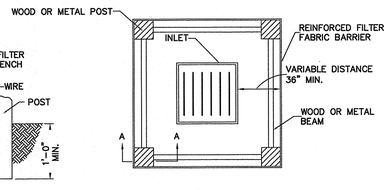
3. UPON THE CONCRETE SETTING UP (CURING, DRYING OUT), THE CONCRETE WASTE SHALL BE REMOVED FROM THE PROJECT SITE AND DISPOSED OF PROPERLY BY THE CONTRACTOR. AFTER REMOVAL OF THE CONCRETE WASTE, THE WASH OUT PIT SHALL BE FILLED WITH CLEAN FILL MATERIAL AND COMPACTED TO IN-SITU CONDITIONS, OR AS DIRECTED 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.

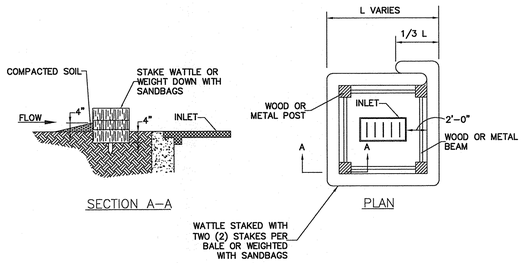
CONCRETE TRUCK WASHOUT AREA

SYMBOL



GENERAL NOTE:

1. SEE REINFORCED FILTER FABRIC BARRIER DETAIL FOR REINFORCED FILTER FABRIC BARRIER REQUIREMENTS.

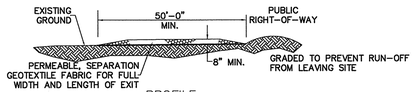


GENERAL NOTE:

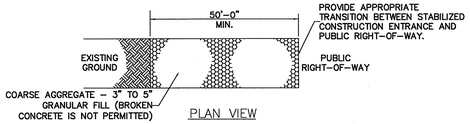
1. TYPICALLY STRAW BALES ARE NOT RECOMMENDED FOR INLET PROTECTION BARRIERS.

INLET PROTECTION BARRIERS FOR STAGE I INLETS

SYMBOL



PROFILE



PLAN VIEW

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. ALTERNATIVE METHODS OF CONSTRUCTION INCLUDE:
   - -CEMENT STABILIZED SOIL: COMPACTED CEMENT STABILIZED SOIL, LIMESTONE AGGREGATE, OR OTHER FILL MATERIAL IN AN APPLICATION OF THICKNESS OF 8 INCHES.
   - -WOOD MATS: OAK OR OTHER HARDWOOD TIMBERS PLACED EDGE TO EDGE AND ACROSS SUPPORT WOODEN BEAMS WHICH ARE PLACED ON TOP OF EXISTING SOIL IN AN APPLICATION THICKNESS OF 6 INCHES.
   - -STEEL MATS: PERFORATED MATS PLACED ACROSS PERPENDICULAR SUPPORT MEMBERS.

STABILIZED CONSTRUCTION ACCESS

SYMBOL
(IF REQUIRED)

SWPPP NOTES & DETAILS

C-6

Scale 1" = 20' JOB: 266-19

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Sheet No. C-6

CONSTRUCTION NOTES:

1. STORM SEWER PIPE SHALL BE ADS N-12 PIPE (CORRUGATED POLYETHYLENE PIPE) PER A.S.T.M. F-405, A.S.T.M. F-667, A.S.T.M. D-2321, AND AASHTO M-294. BEDDING, BACKFILLING, INSTALLATION OF PIPE, AND CONSTRUCTION OF APPURTENANCES SHALL BE IN ACCORDANCE WITH WILLIAMSON COUNTY, AND CITY OF HUTTO, SPECIFICATIONS FOR SEWER CONSTRUCTION, INCLUDING ALL AMENDMENTS AND REVISIONS, THERETO.

2. SANITARY SEWER SHALL BE PVC (POLY-VINYL CHLORIDE) PIPE MEETING A.S.T.M. SPECIFICATIONS D-3034-73 AND HAVING A S.D.R. OF 26, OR AS NOTED. BEDDING, BACKFILLING, INSTALLATION OF PIPE, AND CONSTRUCTION OF APPURTENANCES SHALL BE IN ACCORDANCE WITH WILLIAMSON COUNTY, AND CITY OF HUTTO AND/OR DISTRICT STANDARDS.

3. WATER LINES SHALL BE PVC (POLY-VINYL CHLORIDE) PIPE CONFORMING TO A.W.W.A. C-900 PVC, CLASS 150 OR SCHEDULE 40 PVC OR PER WILLIAMSON COUNTY, AND CITY OF HUTTO AND/OR DISTRICT REQUIREMENTS.

4. PVC PIPE BID IN THIS CONTRACT SHALL CONFORM TO THE MOST CURRENT A.W.W.A. AND A.S.T.M. REQUIREMENTS (INCLUDING A.S.T.M. D2412-PIPE STIFFNESS).

5. CONTRACTOR SHALL PROVIDE ADEQUATE THRUST BLOCKING TO WITHSTAND TEST PRESSURE AS REQUIRED BY THE DISTRICT.

6. ALL UTILITIES PRESENTED ON THESE DRAWINGS ARE SHOWN AT THE APPROXIMATE LOCATIONS BASED ON THE BEST AVAILABLE INFORMATION. THE CONTRACTOR SHALL FIELD DETERMINE THE EXACT LOCATIONS PRIOR TO COMMENCING CONSTRUCTION. HE SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES CAUSED BY HIS FAILURE TO EXACTLY LOCATE AND MAINTAIN THESE UNDERGROUND UTILITIES.

7. CONTRACTOR SHALL UNCOVER EXISTING UTILITIES AT ALL POINTS OF CROSSING TO DETERMINE IF CONFLICT EXISTS BEFORE COMMENCING ANY CONSTRUCTION. NOTIFY THE ENGINEER AT ONCE OF ANY CONFLICT.

8. OWNER TO OBTAIN ALL PERMITS REQUIRED BY WILLIAMSON COUNTY FOR CONSTRUCTION OF UTILITIES AND/OR CULVERTS WITHIN COUNTY ROAD RIGHT-OF-WAY.

9. CONTRACTOR TO OBTAIN ALL PERMITS BY REGULATION OF WILLIAMSON COUNTY, TEXAS FOR FLOOD PLAN MANAGEMENT.

10. ALL FILL COMPACTION AND SUBGRADE PREPARATION SHALL BE IN ACCORDANCE WITH SOIL REPORT SPECIFICATIONS.

11. ALL SEWERS UNDER OR WITHIN ONE (1) FOOT OF PROPOSED OR FUTURE PAVEMENT SHALL BE BACKFILLED WITH 1-1/2 SACK CEMENT STABILIZED SAND TO WITHIN ONE (1) FOOT OF SUBGRADE.

12. THE WORK AREA SHALL BE BARRICADED AND ILLUMINATED DURING DARKNESS AND PERIODS OF INACTIVITY, WHEN IN AN AREA OF DIRECT PUBLIC ACCESS.

13. CONTRACTOR SHALL PROVIDE SHEETING, SHORING, AND BRACING AS NECESSARY TO PROTECT WORKMEN AND EXISTING UTILITIES DURING ALL PHASES OF CONSTRUCTION.

14. UTILITIES ARE TO BE TAKEN WITHIN FIVE (5) FEET OF BUILDING. SEE PLUMBING SHEETS INDICATED FOR CONTINUATION OF SERVICE CONNECTIONS INTO BUILDING.

15. CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING, MAINTAINING, AND RESTORING ALL DRAINAGE SYSTEMS.

16. ALL FINISHED GRADES SHALL VARY UNIFORMLY BETWEEN FINISHED ELEVATIONS AS SHOWN.

17. NO CONNECTIONS SHALL BE MADE TO EXISTING SANITARY SEWER LINES UNTIL ALL PROPOSED SEWER LINES HAVE BEEN THOROUGHLY CLEANED, TESTED, AND APPROVED BY THE ARCHITECT OR ENGINEER.

18. CONTRACTOR IS TO NOTIFY ALL UTILITY COMPANIES TO VERIFY LOCATION AND DEPTH OF ALL EXISTING UTILITY LINES.

19. CONTRACTOR TO OBTAIN ALL PERMITS REQUIRED BY ALL GOVERNING AGENCIES.

20. CONTRACTOR TO COORDINATE WITH ARCHITECTS AND M.E.P. DRAWINGS FOR CONNECTION AND LOCATION OF ALL DOWN SPOUTS AND ALL PLUMBING UTILITIES.

21. OVERHEAD LINES MAY EXIST ON THE PROPERTY. WE HAVE NOT ATTEMPTED TO MARK THOSE LINES SINCE THEY ARE CLEARLY VISIBLE, BUT YOU SHOULD LOCATE THEM PRIOR TO BEGINNING ANY CONSTRUCTION. TEXAS LAW, SECTION 752, HEALTH & SAFETY CODE, FORBIDS ALL ACTIVITIES IN WHICH PERSONS OR THINGS MAY COME WITHIN SIX (6) 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 MOVED, CALL RELIANT ENERGY H.L.&P. AT 713-207-7777.

22. CONTRACTOR SHALL PROVIDE AND INSTALL TRAFFIC CONTROL DEVICES IN CONFORMANCE WITH PART VI OF THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (TEXAS M.U.T.C.D. MOST RECENT EDITION WITH REVISIONS) DURING CONSTRUCTION.

23. CAUTION: UNDERGROUND GAS FACILITIES
ENTEX MAIN LINES (TO INCLUDE UNIT GAS TRANSMISSION, AND/OR INDUSTRIAL GAS SUPPLY CORPORATION WHERE APPLICABLE) ARE SHOWN IN AN APPROXIMATE LOCATION ONLY. SERVICE LINES ARE USUALLY NOT SHOWN. THE CONTRACTOR SHALL CONTACT THE UTILITY COORDINATING COMMITTEE AT 713-223-4567 OR 1-800-669-8344 A MINIMUM OF 48 HOURS PRIOR TO CONSTRUCTION TO HAVE MAIN AND SERVICE LINES FIELD LOCATED.

* WHEN RELIANT ENERGY ENTEX PIPE LINE MARKINGS ARE NOT VISIBLE, CALL 713-967-8037 (7:00 A.M. TO 4:30 P.M.) FOR STATUS OF LINE LOCATION REQUEST BEFORE EXCAVATION BEGINS.
* WHEN EXCAVATING WITHIN EIGHTEEN (18) INCHES OF THE INDICATED LOCATION OF RELIANT ENERGY ENTEX FACILITIES, ALL EXCAVATION MUST BE ACCOMPLISHED USING NON-MECHANIZED EXCAVATING PROCEDURES.
* WHEN RELIANT ENERGY ENTEX FACILITIES ARE EXPOSED, SUFFICIENT SUPPORT MUST BE PROVIDED TO THE FACILITIES TO PREVENT EXCESSIVE STRESS ON THE PIPING.

24. AT&T TEXAS/SWBT UTILITIES MAY EXIST IN STREET RIGHT OF WAY. 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 HIS FAILURE TO EXACTLY LOCATE AND PRESERVE THESE UNDERGROUND UTILITIES.

25. ALL EXISTING POWER POLES, LIGHT STANDARDS, SIGNS, ETC. WHICH AFFECT THE PROPOSED CONSTRUCTION, SHALL BE REMOVED AND/OR RELOCATED AS REQUIRED WHETHER SHOWN ON DRAWINGS OR NOT.

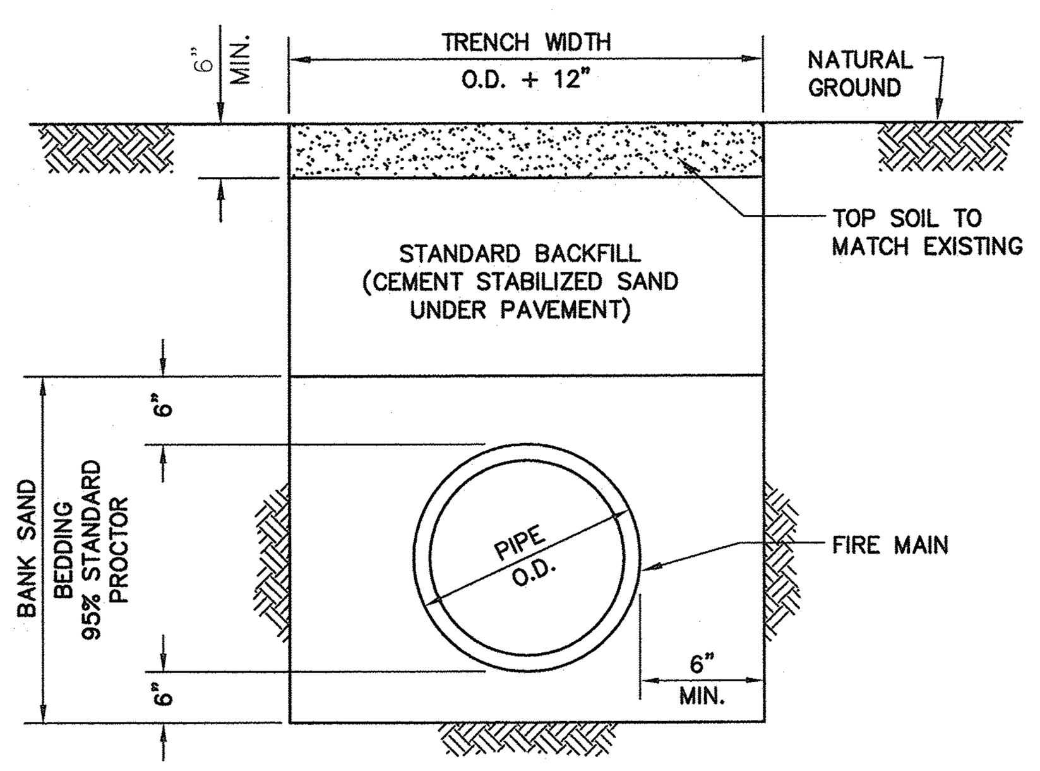
26. THE CONTRACTOR SHALL PROVIDE A TRENCH SAFETY SYSTEM TO MEET APPROPRIATE REQUIREMENTS ESTABLISHED IN OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) SAFETY & HEALTH REGULATIONS, 29 CFR 1926, SUBPART P – EXCAVATIONS, TRENCHING, AND SHORING, AND OSHA PROPOSED STANDARDS ON TRENCHING, EXCAVATION PUBLISHED IN VOLUME 52, NO. 72 OF THE FEDERAL REGISTER, APRIL 15, 1987, PAGES 12288-12339. SHOULD THE REFERENCED OSHA STANDARDS BE MODIFIED OR AMENDED, THE MORE STRINGENT REQUIREMENTS SHALL APPLY.

27. ADEQUATE DRAINAGE SHALL BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION AND ANY DRAINAGE DITCH OR STRUCTURE DISTURBED DURING CONSTRUCTION SHALL BE RESTORED TO THE SATISFACTION OF THE OWNING AUTHORITY.

28. GUIDELINES SET FORTH IN THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES SHALL BE OBSERVED.

29. ALL SIDEWALKS SHALL HAVE A MAXIMUM CROSS SLOPE OF 2.00% PER ADA REQUIREMENTS.

30. THE CONTRACTOR SHALL NOT MAKE ANY FIELD MODIFICATION WITHOUT THE APPROVAL OF THE ENGINEER, TEXAS ENGINEERING AND MAPPING CO., (281) 491-2525. THE APPROVAL MUST BE OBTAINED PRIOR TO RESUMING ANY CONSTRUCTION IN THE AFFECTED AREA.



GENERAL NOTES:

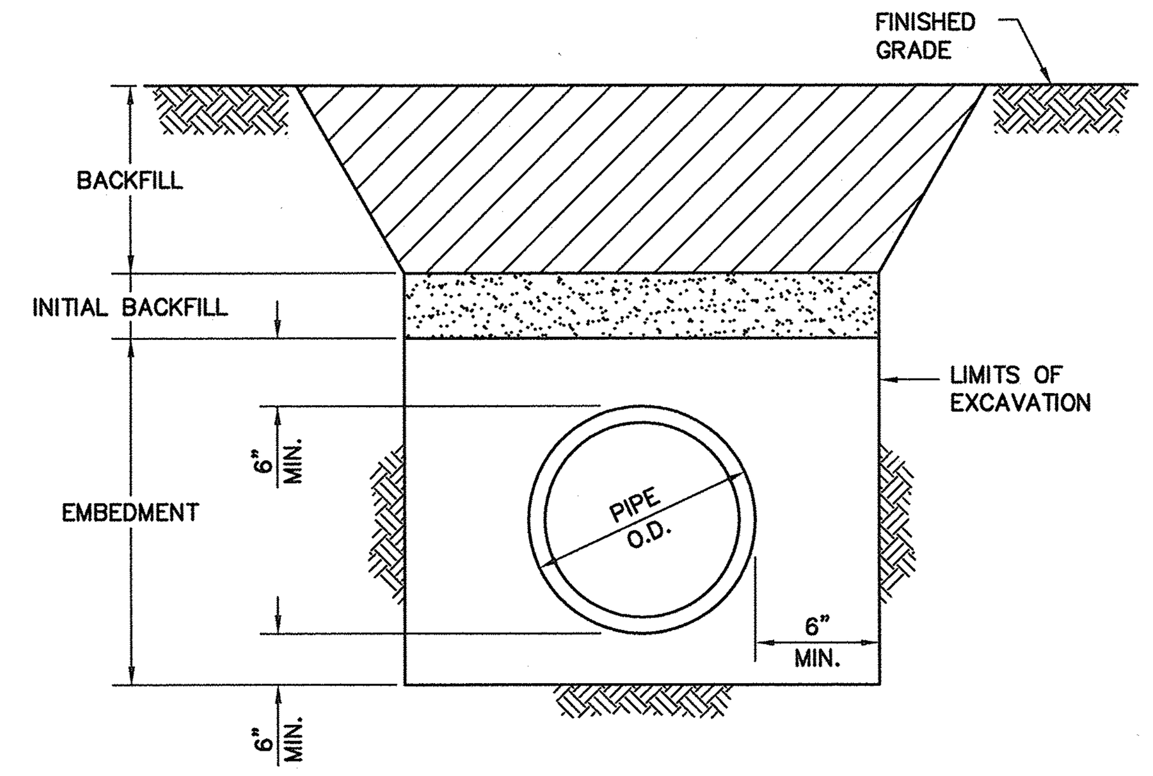
1. BACKFILL SHALL BE NATIVE SOIL, FREE OF DEBRIS, PLACED IN LIFTS OF EIGHT (8) INCHES OR LESS, COMPACTED TO 95% STANDARD PROCTOR DENSITY, EXCEPT AS REQUIRED UNDER PAVEMENT.

2. BACKFILL UNDER PAVEMENT AND PUBLIC STREETS SHALL BE CEMENT STABILIZED SAND (1.5 SACKS OF CEMENT PER CUBIC YARD OF SAND), COMPACTED TO 95% STANDARD PROCTOR DENSITY.

3. TRENCH SHORING, IN ACCORDANCE WITH OSHA, SHALL BE INSTALLED AS REQUIRED.

FIRE/WATER MAIN BEDDING AND BACKFILL

N.T.S.



GENERAL NOTES:

1. BACKFILL SHALL BE NATIVE SOIL, FREE OF DEBRIS, COMPACTED TO 95% STANDARD PROCTOR DENSITY, EXCEPT AS REQUIRED UNDER PAVEMENT.

2. INITIAL BACKFILL SHALL BE UNIFORMLY GRADED MATERIAL (MAXIMUM SIZE, 3" DIAMETER), PLACED IN 8" LIFTS AND COMPACTED TO 95% STANDARD PROCTOR DENSITY, EXCEPT AS REQUIRED UNDER PAVEMENT.

3. EMBEDMETN SHALL BE CEMENT STABILIZED SAND (1.5 SACKS PER CUBIC YARD) COMPACTED TO 95% STANDARD PROCTOR DENSITY.

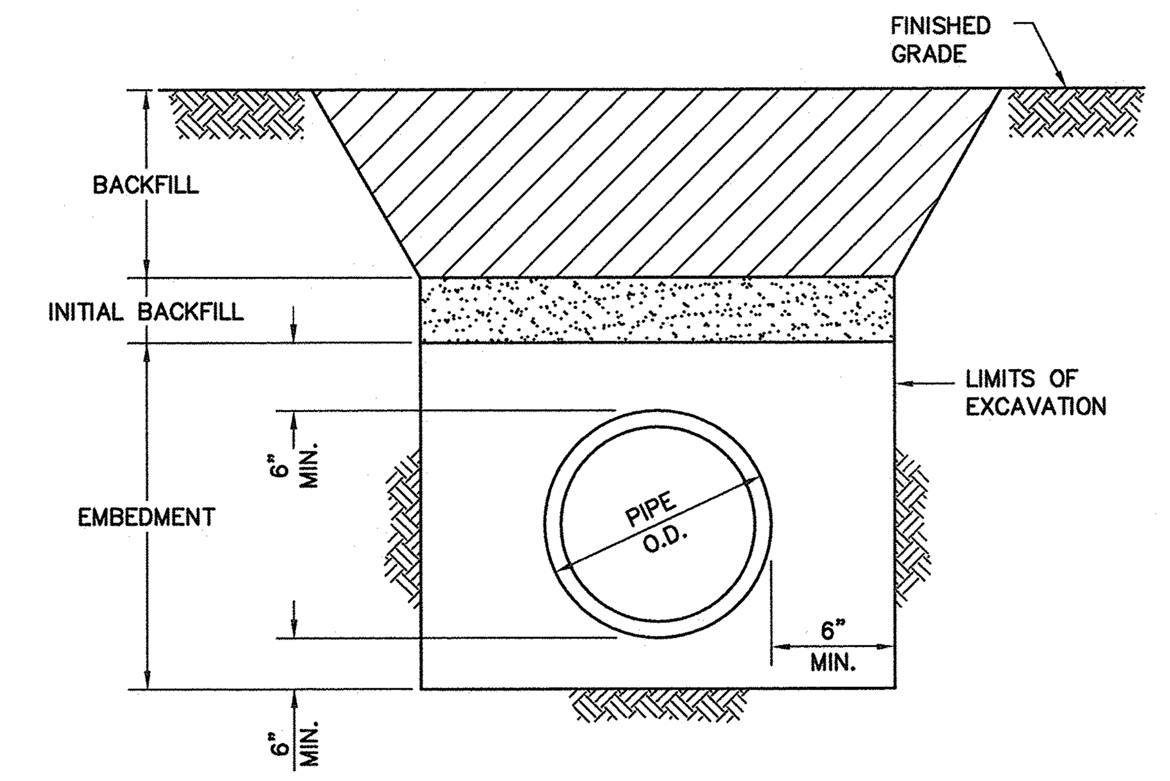
4. UNDER PAVING OR WITHIN 3' OF PAVEMENT, THE INITIAL BACKFILL AND ALL BACKFILL UP TO THE PAVEMENT SUBGRADE SHALL BE CEMENT STABILIZED SAND (1.5 SACKS PER CUBIC YARD) COMPACTED TO 95% STANDARD PROCTOR DENSITY.

5. TRENCH SHORING IN ACCORDANCE WITH OSHA, SHALL BE INSTALLED WHERE REQUIRED.

6. SOIL IN THE PIPE ZONE SHALL CONSIST OF NON-WATERBEARING, COHESIVE SOILS WITH A SHEAR STRENGTH OF 1000 PSF OR GREATER. WHEN WET SAND EXISTS IN THE PIPE ZONE, MODIFIED BEDDING SHALL BE INSTALLED.

STORM SEWER BEDDING AND BACKFILL

N.T.S.



GENERAL NOTES:

1. BACKFILL SHALL BE NATIVE SOIL, FREE OF DEBRIS, COMPACTED TO 95% STANDARD PROCTOR DENSITY, EXCEPT AS REQUIRED UNDER PAVEMENT.

2. INITIAL BACKFILL SHALL BE UNIFORMLY GRADED MATERIAL (MAXIMUM SIZE, 3" DIAMETER), PLACED IN 8" LIFTS AND COMPACTED TO 95% STANDARD PROCTOR DENSITY, EXCEPT AS REQUIRED UNDER PAVEMENT.

3. EMBEDMETN SHALL BE CEMENT STABILIZED SAND (1.5 SACKS PER CUBIC YARD) COMPACTED TO 95% STANDARD PROCTOR DENSITY.

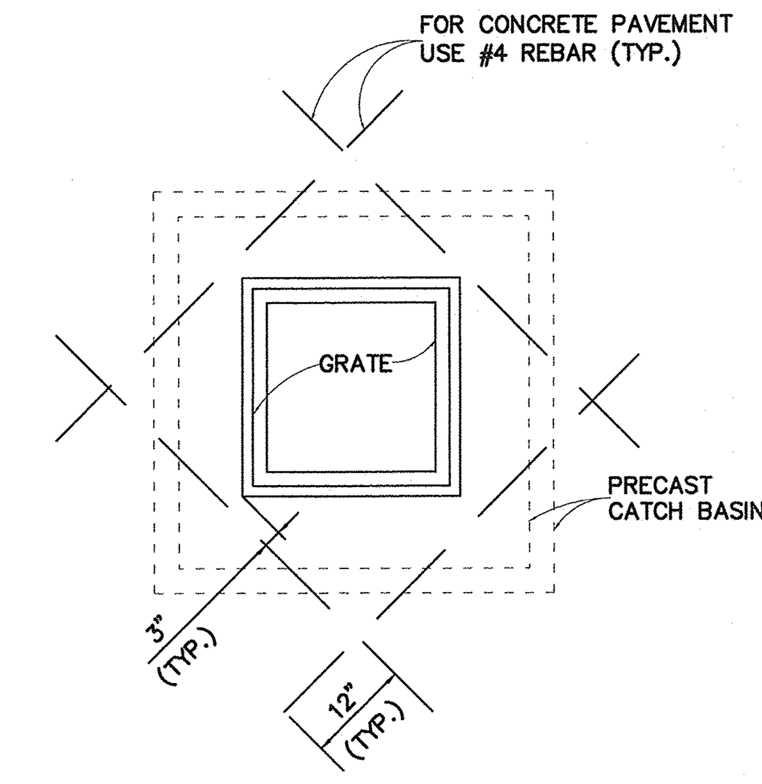
4. UNDER PAVING OR WITHIN 3' OF PAVEMENT, THE INITIAL BACKFILL AND ALL BACKFILL UP TO THE PAVEMENT SUBGRADE SHALL BE CEMENT STABILIZED SAND (1.5 SACKS PER CUBIC YARD) COMPACTED TO 95% STANDARD PROCTOR DENSITY.

5. TRENCH SHORING IN ACCORDANCE WITH OSHA, SHALL BE INSTALLED WHERE REQUIRED.

6. SOIL IN THE PIPE ZONE SHALL CONSIST OF NON-WATERBEARING, COHESIVE SOILS WITH A SHEAR STRENGTH OF 1000 PSF OR GREATER. WHEN WET SAND EXISTS IN THE PIPE ZONE, MODIFIED BEDDING SHALL BE INSTALLED.

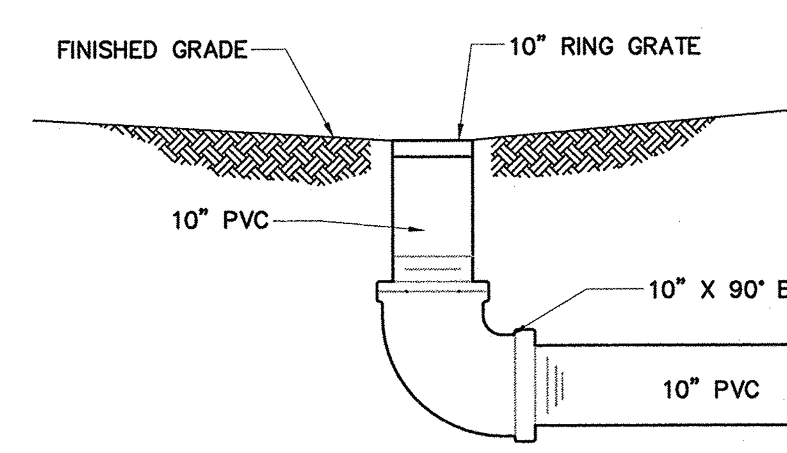
SANITARY SEWER BEDDING AND BACKFILL

N.T.S.



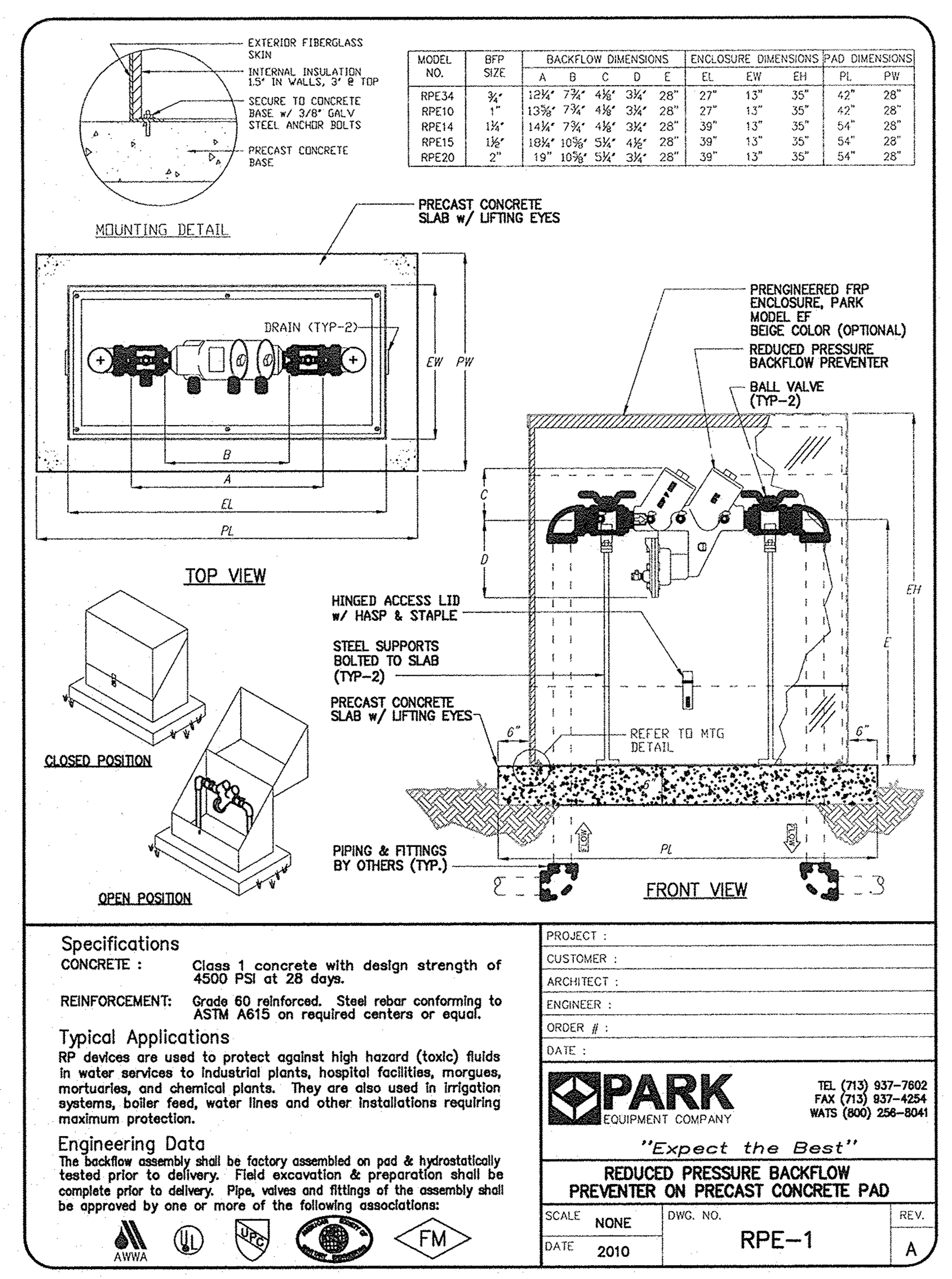
DIAGONAL REINFORCEMENT

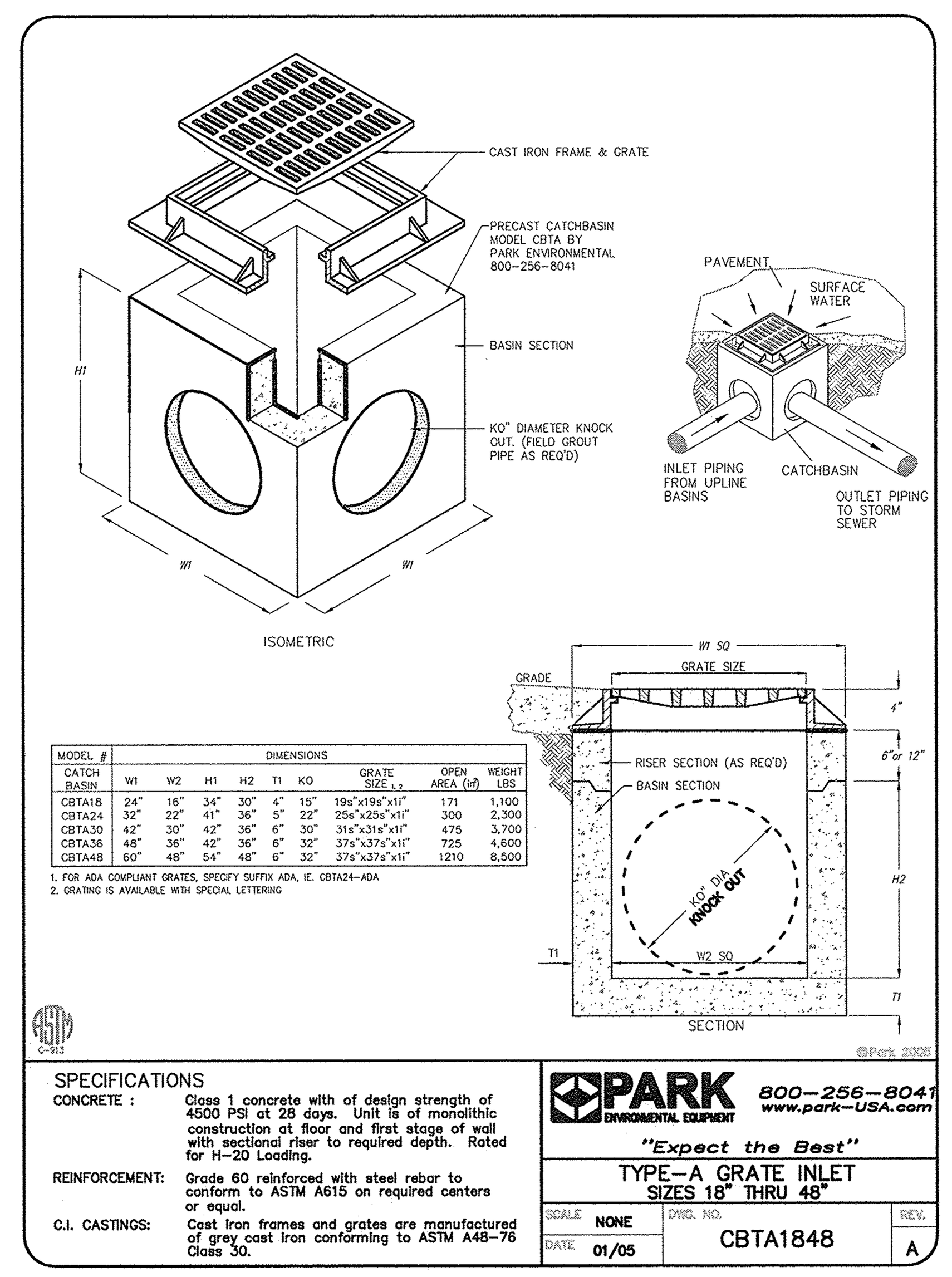
N.T.S.

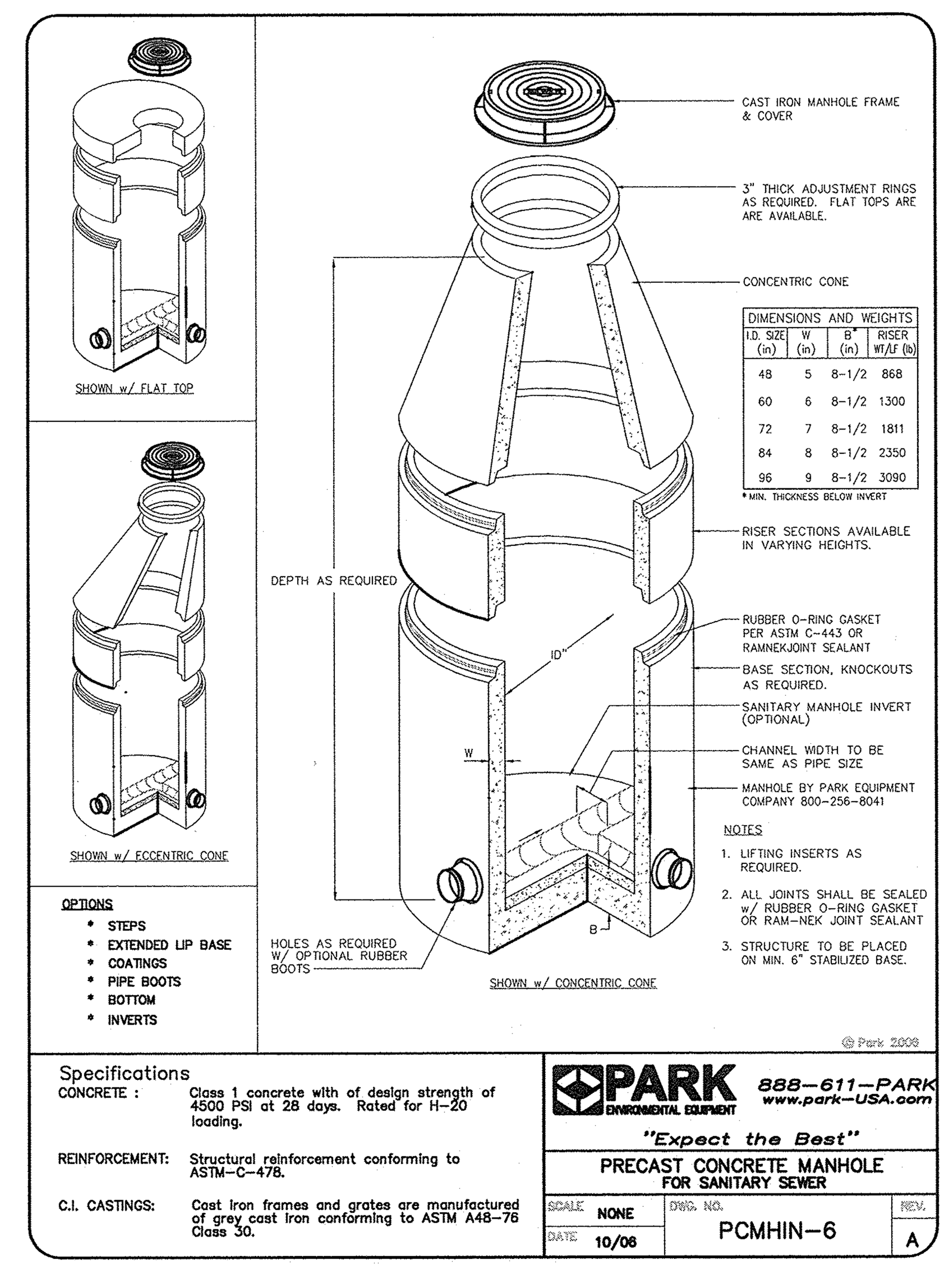


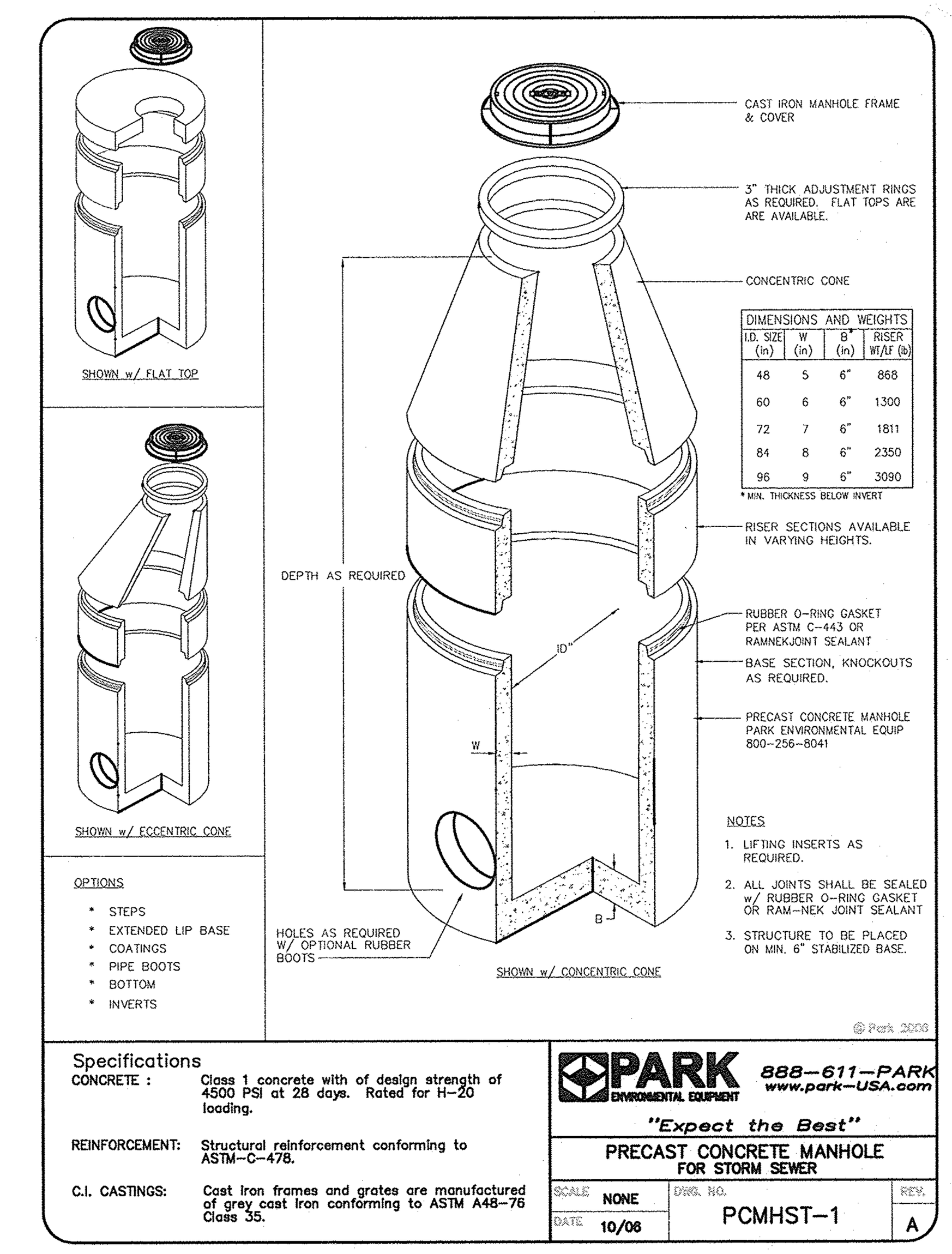
10" CIRCULAR DRAIN DETAIL

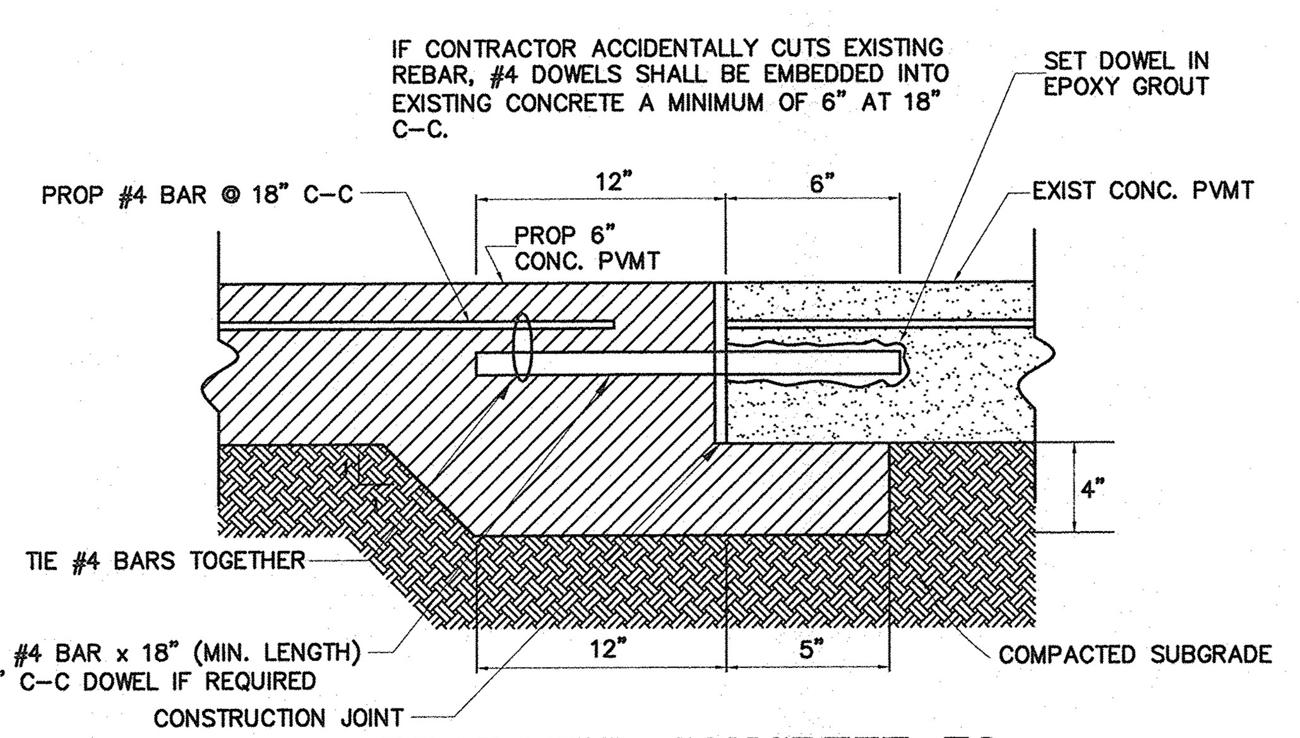
N.T.S.







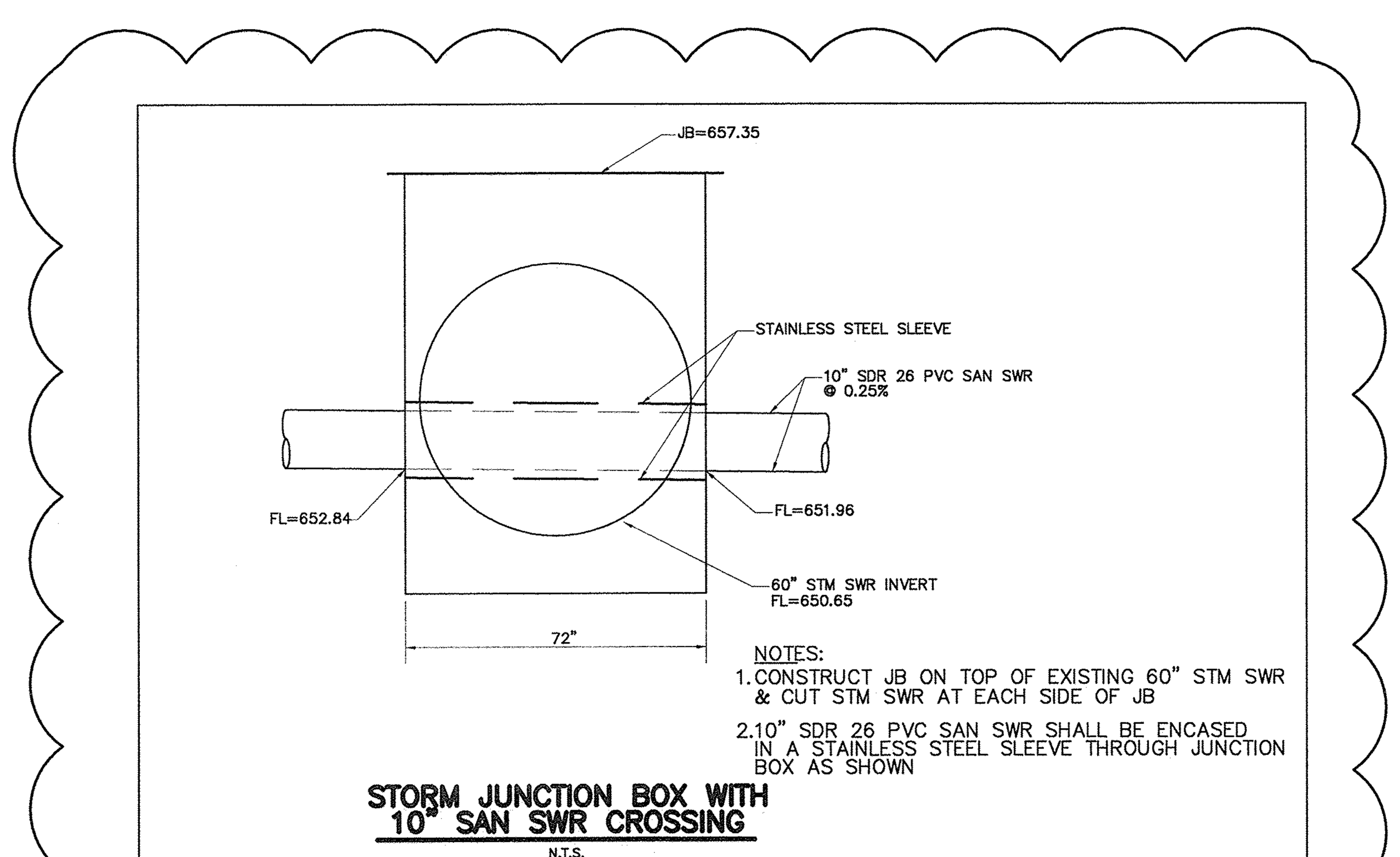




IF CONTRACTOR ACCIDENTALLY CUTS EXISTING REBAR, #4 DOWELS SHALL BE EMBEDDED INTO EXISTING CONCRETE A MINIMUM OF 6" AT 18" C-C.
SET DOWEL IN EPOXY GROUT
PROP #4 BAR @ 18" C-C
12"
6"
PROP 6" CONC. PVMT
EXIST CONC. PVMT
4"
TIE #4 BARS TOGETHER
PROP #4 BAR x 18" (MIN. LENGTH) @ 18" C-C DOWEL IF REQUIRED
12"
5"
COMPACTED SUBGRADE
CONSTRUCTION JOINT

PROPOSED CONCRETE TO EXISTING CONCRETE

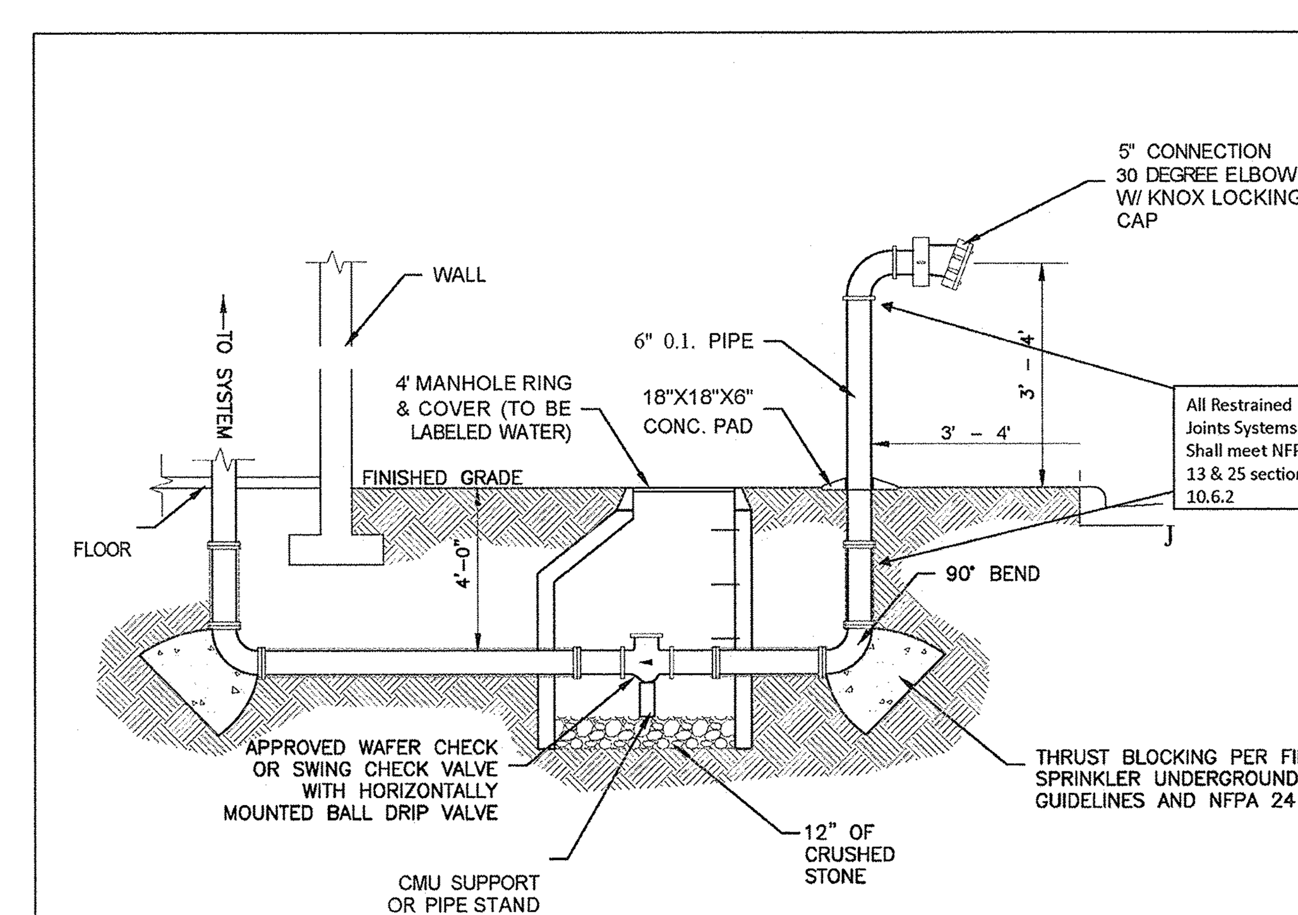
N.T.S.



NOTES:
1. CONSTRUCT JB ON TOP OF EXISTING 60" STM SWR & CUT STM SWR AT EACH SIDE OF JB
2. 10" SDR 26 PVC SAN SWR SHALL BE ENCASED IN A STAINLESS STEEL SLEEVE THROUGH JUNCTION BOX AS SHOWN

STORM JUNCTION BOX WITH 10" SAN SWR CROSSING

N.T.S.



5" CONNECTION 30 DEGREE ELBOW W/ KNOX LOCKING CAP
WALL
TO SYSTEM
6" O.I. PIPE
4' MANHOLE RING & COVER (TO BE LABELED WATER)
18"X18"X6" CONC. PAD
FINISHED GRADE
3' - 4'
All Restrained Joints Systems Shall meet NFPA 13 & 24 section 10.6.2
FLOOR
90° BEND
APPROVED WAFER CHECK OR SWING CHECK VALVE WITH HORIZONTALLY MOUNTED BALL DRIP VALVE
THRUST BLOCKING PER FIRE SPRINKLER UNDERGROUND GUIDELINES AND NFPA 24
CMU SUPPORT OR PIPE STAND
12" OF CRUSHED STONE

FIRE DEPARTMENT CONNECTION

NOT TO SCALE

GENERAL NOTES & DETAILS

C-7

Scale 1" = 20'   JOB: 266-19

SEE SHT C-0 FOR TOPOGRAPHIC SURVEY
SEE SHT C-1 FOR GRADING & DRAINAGE
SEE SHT C-1A FOR GRADING & DRAINAGE (ALTERNATE BID ITEMS)
SEE SHT C-1B FOR DRAINAGE LAYOUT
SEE SHT C-2 FOR STORM SEWER LAYOUT
SEE SHT C-2A FOR STORM SEWER LAYOUT (ALTERNATE BID ITEMS)
SEE SHT C-2B FOR STORM CALCULATION TABLE
SEE SHT C-3 FOR WATER & SANITARY LAYOUT
SEE SHT C-4 FOR PAVING JOINT LAYOUT
SEE SHT C-4A FOR PAVING JOINT LAYOUT (ALTERNATE BID ITEMS)
SEE SHT C-5 FOR SWPPP LAYOUT
SEE SHT C-6 FOR SWPPP NOTES & DETAILS
SEE SHT C-7 FOR GENERAL NOTES & DETAILS
SEE SHT C-8 FOR CITY OF HUTTO NOTES & DETAILS

TEXAS ENGINEERING AND MAPPING CO.
12718 CENTURY DRIVE
STAFFORD, TEXAS 77477
PHONE: 281.491.2525 FAX: 281.491.2535
SURVEYING FIRM NO. 10119000 / ENGINEERING FIRM NO. F-2906
www.team-civil.com

Date issued/revised

14 NOV 18 FOR PRICING
10 DEC 18 SITE PLAN RESUBMITTAL
15 MAR 2019 FOR PERMIT
2 JUL 2019 FOR CONSTRUCTION
1 NOV 2019 BULLETIN #4

AS-BUILT
WORKMAN
5/26/2020

OSBORN & VANE ARCHITECTS Inc.
2000 Bering Drive, Suite 410
Houston, Texas 77057
713 781 5262
Fax 713 781 5347
Members American Institute of Architects

SHELL BUILDING & SITE WORK DEVELOPMENT

720/722 US 79 WEST TOWNWEST COMMONS
HUTTO, TX 78634

Project No.	18064
Drawn	JS
Checked	BS

Sheet No. C-7

City Of Hutto - General Construction Notes

Updated March 2019

1. The contractor is to contact one of the following:
   Texas811 811
   Lone star 1-800-669-8344
   For location of existing facilities at least 48 hours prior to commencement of any construction activities.
2. Prior to any construction, the design engineer shall convene a preconstruction conference between the City of Hutto, himself, the contractor, other utility companies, any affected parties and any other entity the City or engineer may require. If construction is not started on the site within 30 calendar days after the pre-construction conference, the engineer shall convene a new preconstruction conference between the City of Hutto, himself, and all the above mentioned entities.
3. Prior to any changes to the construction site, video of the site must be taken and provided to the City before construction commences.
4. All construction operations shall be performed in accordance with City of Hutto Engineering Manual and standard construction specifications and details. If City of Hutto Engineering Manual unavailable, or not applicable, refer to TxDOT and/or City of Georgetown Manual, standards and/or specifications.
5. All storm sewer bends and wyes shall be prefabricated.
6. All storm sewer mains to be field-tested for water tightness no sooner than 30 days after total completion of the storm sewer lines.
7. All storm sewer mains to be video taped by camera no sooner than 30 days after total completion of the storm sewer lines. Two digital copies shall be supplied to the City before closeout. All storm sewer conduits will be inspected by the city before city acceptance, video must show details of all irregularities or offsets (minimum 10 seconds of video time).
8. All construction operations shall be accomplished in accordance with applicable regulations of the U.S. Occupational Safety and Health Administration. OSHA standards may be purchased from the government printing office; information and related reference materials may be purchased from OSHA, 611 e. 6th Street, Austin, Texas.
9. Contractor shall take all due precautions to protect existing facilities from damage. Any damage incurred to existing facilities as a result of construction operations to be repaired immediately by the contractor, at no additional cost to owner.
10. Contractor to give notice to all authorized inspectors, superintendents or persons in charge of public and private utilities affected by his operations at least 48 hours prior to commencement of work.

11. Contractor to comply with all applicable local, state, and federal requirements regarding excess and waste material, including methods of handling and disposal.
12. Contractor to coordinate interruptions of all utilities and services. All work to be in accordance with the requirements of the applicable utility company or agency involved.
13. When un-located or incorrectly located, a break in utility lines, or other utilities and services are encountered during site work operations, contractor shall notify the applicable utility company immediately to obtain procedure directions. Contractor shall cooperate with the applicable utility company in maintaining active services in operation.
14. Contractor to locate, protect, and maintain benchmarks, monuments, control points and project engineering reference points. Re-establish disturbed or destroyed items by registered professional land surveyor in the State of Texas, at no additional cost to owner.
15. When construction is being carried out within easements, the contractor shall confine his work to within the permanent and temporary easements. Prior to final acceptance, the contractor shall be responsible for removing all trash and debris within the permanent and temporary easements. Clean-up shall be to the satisfaction of the engineer.
16. The contractor and the engineer shall keep accurate records of all construction that deviates from the plans. Accurate "record" drawings will be provided to the City of Hutto, along with a letter certification from a registered professional engineer licensed in the State of Texas, stating that said project has been constructed in accordance with these plans, prior to the owner being issued a certification of completion and final acceptance. These "record" drawings shall meet with the satisfaction of the Engineering and Development Services Departments prior to final acceptance.
17. Contractor shall strip six (6) inches of topsoil from all areas subject to grade modification. Remove all areas of weak soil.
18. The contractor shall protect all existing fences. In the event that a fence must be removed, the contractor shall replace said fence or portion thereof with the same type of fencing to a quality of equal or better than the original fence.
19. Upon completion of the project, the site(s) as defined herein shall be cleaned of all debris and left in a neat and presentable condition.
20. All adjoining pavement sections shall be protected during all phases of construction and any damages incurred due to contractor's operation shall be repaired and/or replaced at the contractor's expense.
21. Contractor to control dust caused by the work and comply with pollution control regulations of governing authorities (no separate pay).
22. Traffic controls to be installed in accordance with the current TxDOT manual on uniform traffic control devices and TxDOT barricade and construction standards.
23. Revegetate all disturbed areas upon completion of the work per City of Georgetown construction standards.

24. Contractor to exercise caution during construction near and around gas lines and power lines.
25. No work is to be performed between the hours of 6:00 p.m. and 7:00 a.m. all work requiring City inspection shall be performed Monday thru Friday. The City reserves the right to require the contractor to uncover all work performed without inspection.
26. The Contractor shall determine the exact location vertically and horizontally of all existing utilities prior to commencing work, and shall notify the engineer and the City if the existing utility location and depths are different from what is shown on the plans. The contractor agrees to be fully responsible for any and all damages which might be associated by the contractor's failure to exactly locate and preserve any and all underground utilities.
27. All Fire Lines shall be ductile iron.
28. Detectable tape shall be used for all underground utilities. Tape must be 12" wide 5 mil with applicable color and label.
29. Contractor will be responsible for keeping roads and drives adjacent to and near the site free from soil, sediment and debris. Contractor will not remove soil, sediment or debris from any area or vehicle by means of water, only shoveling and sweeping will be allowed. Contractor will be responsible for dust control from the site.
30. The Contractor shall be responsible for all damage to private property which occurs as a result of any portion of this project. Any damage to private property shall be repaired to equal or better condition. The Contractor shall pay and/or settle with private property owner(s) for all cost related to damage. The City will not provide separate pay for repair of damages, reimbursements or settlements.

City of Hutto - Wastewater Notes

Updated August 2018

1. Wastewater systems shall be constructed in accordance with the City of Hutto Engineering Design Manual, standard specifications and standard details.
2. No curvilinear wastewater design/layout is permitted.
3. All wastewater service, and valve locations shall be appropriately marked as follows:
   A. Wastewater Service "S" on top of curb
   B. Valve "V" on top of curb
4. Tools for marking curbs shall be provided by the Contractor. Other appropriate means of marking service and valve locations shall be provided in areas without curbs. Such means of marking shall be specified by the Design Engineer and approved by the City of Hutto.
5. Thrust blocking and restraints shall be in accordance with City of Hutto standard specifications.
6. Mandrel testing will be required on all wastewater pipe as per City of Hutto construction specifications.
7. All gravity wastewater mains to be field-tested for water tightness and video taped by camera so sooner than 30-days after total completion of wastewater lines. Two digital copies shall be provided to the City before closeout.
8. Hydrostatic pressure and leakage tests shall be performed on all pressure pipelines carrying wastewater.
9. All manholes shall be tested for leakage separately and independently of wastewater lines by hydrostatic exfiltration testing or other City approved method per City of Hutto construction specifications.
10. Existing manholes shall be tested for leakage prior to coring or adjustment.
11. Existing manholes shall have all concrete surfaces cleaned and coated per City of Hutto wastewater details after coring or adjustment.
12. All newly installed pipes and related products must conform to American National Standards Institute / National Sanitation Foundation Standard 61 and must be certified by an organization accredited by ANSI.
13. Pipe material for pressure wastewater mains shall be PVC (AWWA C900, MIN. DR 14), or Ductile Iron (AWWA C151, MIN. CLASS 350). Ductile iron for pressure wastewater mains shall have a corrosion resistant interior lining acceptable to owner. Pipe material for gravity wastewater mains shall be PVC SDR-26, ASTM D-3034.
14. All PVC pipe (all types and SDR/DR wall thickness to be used) shall have rubber gasket equipped bell and spigot joints conforming to ASTM D-3212. The gasket material shall conform to ASTM F-477. Solvent welded joints **will not** be approved for this project.
15. All sanitary sewer facilities and potable waterlines must be installed so as to provide a minimum of nine feet of clearance in any direction between them. Where the nine foot separation distance cannot be achieved, follow these special procedures.

A. If a collection system pipe parallels a public water supply pipe the following requirements apply:
   I. A collection system pipe must be constructed of cast iron, ductile iron, or PVC meeting ASTM specifications with at least 150 pounds per square inch (PSI) pressure rating for both the pipe and joints.
   II. Vertical separation must be at least two feet between the outside diameters of the pipes.
   III. Horizontal separation must be at least four feet between outside diameters of the pipes.
   IV. Collection system pipe must be below water supply pipe.
B. If a collection system pipe crosses a public water supply pipe, the following requirements apply:
   I. If a collection system is constructed of cast iron, ductile iron, or PVC with a minimum pressure rating of 150 PSI, the following requirements apply:
      a. A minimum distance of six (6) inches between outside diameters of the pipes.
      b. A collection system pipe must be below a public water supply pipe.
      c. Collection system pipe joints must be located as far as possible from an intersection with a public water supply line.
   II. If a collection system crosses over a public water supply pipe, each portion of a collection system pipe within nine feet of a public water supply pipe must be constructed of cast iron, ductile iron, or PVC pipe with a pressure rating of at least 150 PSI using appropriate adapters.
16. An independent qualified lab, at the Contractor's expense, shall perform quality testing for all wastewater pipe installed and pressure hydrostatic testing of all water lines constructed. The contractor shall provide all equipment (including pumps and gages), supplies, and labor necessary to perform the tests. A City of Hutto Construction Inspector must be present for all testing.
17. The Contractor shall provide the design engineer and the City not less than 24 hours notice prior to performing sterilization, quality testing, or pressure testing.
18. The Contractor shall not open or close any valves unless authorized by the City of Hutto.
19. All valve boxes and covers shall be cast iron per City of Hutto standard details.
20. All manholes shall be concrete with cast iron ring and cover. All manholes located outside of pavement shall have bolted and gasketed covers. Concrete manholes to be coated per standard detail and construction specifications. Tapping of fiberglass manholes shall not be permitted.
21. All wastewater piping and fittings shall be virgin stock.
22. All mechanical restraints shall be installed per manufacturer's specifications.

Date issued/revised

14 NOV 18 FOR PRICING
10 DEC 18 SITE PLAN RESUBMITTAL
15 MAR 2019 FOR PERMIT
2 JUL 2019 FOR CONSTRUCTION

AS BUILT
WORKMAN
5/26/2020

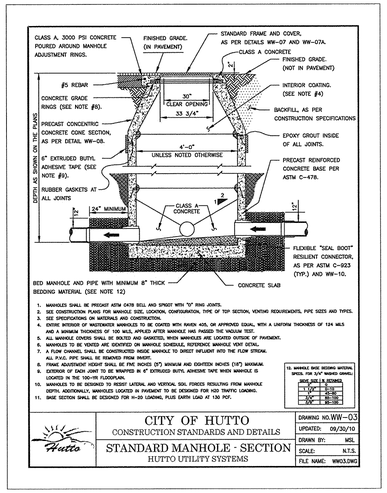
City of Hutto - Water Notes

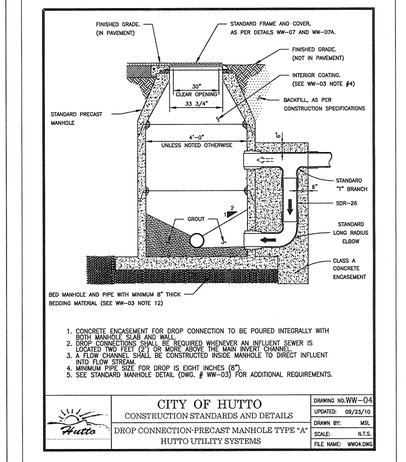
Updated March 2019

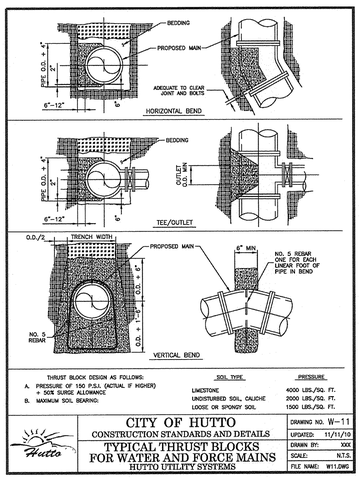
1. Water systems shall be constructed in accordance with City of Hutto Engineering Manual, standard specifications and standard details.
2. Fire hydrants on mains under construction shall be securely wrapped with a poly wrap bag and taped into place. The poly wrap shall be removed when the mains are accepted and brought into service. All fire lines shall be ductile. iron
3. All water service, wastewater service, and valve locations shall be appropriately marked as follows:
   A. Water Service "W" on top of curb
   B. Valve "V" on top of curb or valve sign as instructed by City Engineer
4. Tools for marking curbs shall be provided by the Contractor. Other appropriate means of marking service and valve locations shall be provided in areas without curbs. Such means of marking shall be specified by the engineer and approved by the City of Hutto.
5. Thrust blocking and restraints shall be in accordance with City of Hutto standard specifications.
6. Hydrostatic pressure and leakage tests shall be performed on all pressure pipelines carrying water.
7. All newly installed pipes and related products must conform to American National Standards Institute must be certified by an organization accredited by ANSI.
8. Pipe material for water mains shall be PVC (AWWA C900/C905, MIN. DR 14), or Ductile Iron (AWWA C151, MIN. CLASS 350). Water services (2" OR SMALLER) shall be polyethylene tubing (BLACK, 200 PSI, DR 9).
9. All ductile iron pipe (D.I.P) shall be wrapped with eight (8) MIL, black virgin polyethylene wrap as specified in ANSI/AWWA C105/A21.5.
10. All D.I.P. shall be lined with virgin polyethylene conforming to ASTM D-1248; 40 MIL thickness (nominal), 35 MILS (minimum). Liner to be Polybond or equal. At any point where D.I.P. cannot be wrapped in polyethylene, coat the exterior with Polybond or approved equal.
11. All PVC pipe (all types and SDR/DR wall thickness to be used) shall have rubber gasket equipped bell and spigot joints conforming to ASTM D-3212. The gasket material shall conform to ASTM F-477. Solvent welded joints will not be approved for this project.
12. All potable waterlines and sanitary sewer facilities must be installed so as to provide a minimum of nine feet of clearance in any direction between them. Where the nine foot separation distance cannot be achieved, follow these special procedures.
   A. If a collection system pipe parallels a public water supply pipe the following requirements apply:
      I. A collection system pipe must be constructed of cast iron, ductile iron, or PVC meeting ASTM specifications with at least 150 pounds per square inch (PSI) pressure rating for both the pipe and joints.

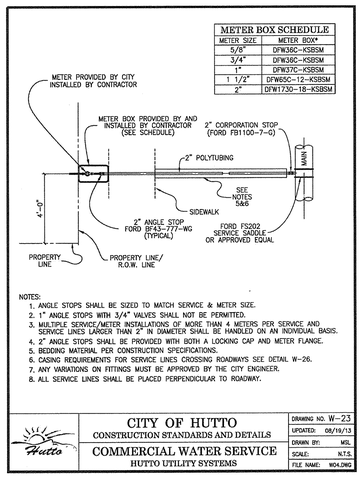
   II. Vertical separation must be at least two feet between the outside diameters of the pipes.
   III. Horizontal separation must be at least four feet between outside diameters of the pipes.
   IV. Collection system pipe must be below water supply pipe.
B. If a collection system pipe crosses a public water supply pipe, the following requirements apply:
   I. If a collection system is constructed of cast iron, ductile iron, or PVC with a minimum pressure rating of 150 PSI, the following requirements apply:
      a. A minimum distance of six (6) inches between outside diameters of the pipes.
      b. A collection system pipe must be below a public water supply pipe.
      c. Collection system pipe joints must be located as far as possible from an intersection with a public water supply line.
   II. If a collection system crosses over a public water supply pipe, each portion of a collection system pipe within nine feet of a public water supply pipe must be constructed of cast iron, ductile iron, or PVC pipe with a pressure rating of at least 150 PSI using appropriate adapters.
13. The Contractor must obtain a temporary water meter from the City of Hutto Utility Billing Department for all water used during construction.
14. Contractor to schedule water valve closure through City of Hutto: Department of Public Works – Utility Division with advance notice of 7 days. Contractor to contact public works at phone # 512-759-4016 and notify construction inspector. Water valve closure will only be scheduled for Tuesday through Thursday. Contractor to notify all businesses and residents affected by valve closures. Closures must be coordinated to minimize effects on existing customers with considerations given to businesses that require water to maintain operations.
15. Line flushing or any activity using a large quantity of water must be scheduled with the City of Hutto. Contractor will be responsible for tracking the amount of water used during flushing and be required to reimburse the city for water used.
16. The Contractor, at his expense, shall perform sterilization of all potable water lines and shall provide all equipment necessary (including test gages), supplies (including concentrated chlorine disinfection material) and necessary labor required for the sterilization procedure. The sterilization procedure shall be monitored by the Engineer and a City of Hutto Construction Inspector. Water samples will be collected to verify each treated line has attained an initial chlorine concentration of 50 ppm.
17. An independent qualified lab, at the Contractor's expense, shall perform quality testing for all wastewater pipe installed and pressure hydrostatic testing of all water lines constructed. The contractor shall provide all equipment (including pumps and gages), supplies, and labor necessary to perform the tests. A City of Hutto Construction Inspector must be present for all testing.

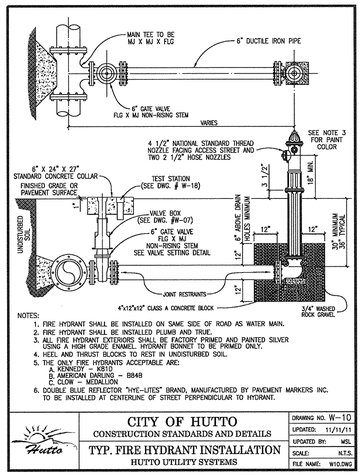
18. The Contractor shall provide the engineer and the city not less than 24 hours notice prior to performing sterilization, quality testing, or pressure testing.
19. The Contractor shall not open or close any valves unless authorized by the City of Hutto.
20. All valve boxes and covers shall be cast iron per City of Hutto standard details.
21. All manholes shall be concrete with cast iron ring and cover. All manholes located outside of pavement shall have bolted and gasketed covers. Concrete manholes to be coated per standard detail and construction specifications. Tapping of fiberglass manholes shall not be permitted.
22. All fire lines shall be ductile iron pipe (AWWA C-100, Class 200).
23. All fire hydrants shall be silver in color including bonnet and installed per City of Hutto Standard detail.
24. All water piping and fittings shall be virgin stock.
25. All mechanical restraints shall be installed per manufacturer's specifications.
26. Along State Highways, water lines are required on both sides of the roadway. New water lines crossing existing streets shall be placed by boring. A steel casing shall be required under major and minor collector roadways, arterial roadways and State Highway. Open cut excavation will not be allowed to cross existing streets, unless approved by the City Engineer.
27. All new water pipes must have detectable tape per City of Hutto Standard Detail.
28. All automatic flush valves must use a meter to measure water loss.
29. Tracer wire will be tested and must work correctly before City acceptance of infrastructure. Tracer wirer must be encased in pipe.
30. All reduced size taps shall be made using an epoxy coated fabricated steel tapping sleeve with stainless steel bolts, or a stainless steel full circle tapping sleeve with ductile iron flange.

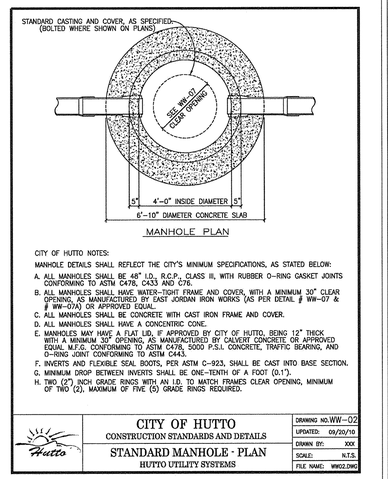












CITY OF HUTTO NOTES & DETAILS

C-8

Scale N.T.S. JOB: 266-19

SEE SHT C-0 FOR TOPOGRAPHIC SURVEY
SEE SHT C-1 FOR GRADING & DRAINAGE
SEE SHT C-1A FOR GRADING & DRAINAGE (ALTERNATE BID ITEMS)
SEE SHT C-1B FOR DRAINAGE LAYOUT
SEE SHT C-2 FOR STORM SEWER LAYOUT
SEE SHT C-2A FOR STORM SEWER LAYOUT (ALTERNATE BID ITEMS)
SEE SHT C-2B FOR STORM CALCULATION TABLE
SEE SHT C-3 FOR WATER & SANITARY LAYOUT
SEE SHT C-4 FOR PAVING JOINT LAYOUT
SEE SHT C-4A FOR PAVING JOINT LAYOUT (ALTERNATE BID ITEMS)
SEE SHT C-5 FOR SWPPP LAYOUT
SEE SHT C-6 FOR SWPPP NOTES & DETAILS
SEE SHT C-7 FOR GENERAL NOTES & DETAILS
SEE SHT C-8 FOR CITY OF HUTTO NOTES & DETAILS

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SHELL BUILDING & SITE
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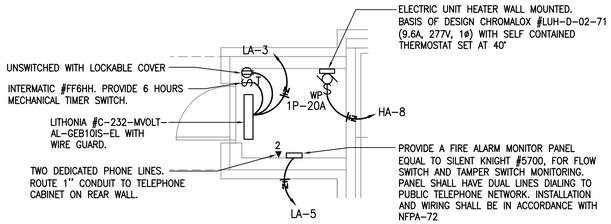
Project No. 18064
Drawn JS
Checked BS

Sheet No. C-8



2 ENLARGED SPRINKLER RM. - BLDG. 'A'

SCALE: 1/4" = 1'-0"

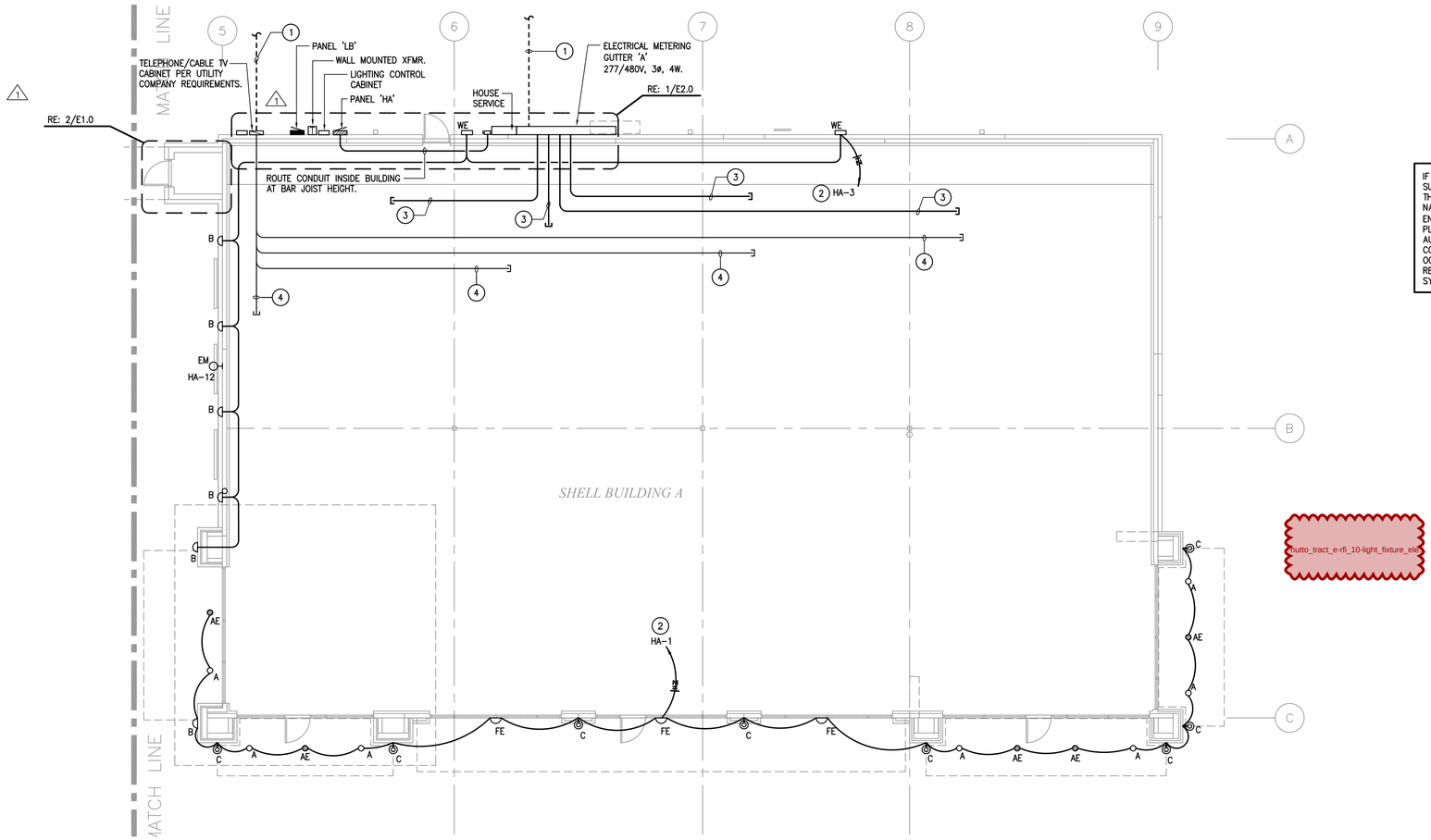
G.C. IS RESPONSIBLE FOR CONNECTION OF ALL UTILITIES, ESTABLISHING ACCOUNTS, THEN TRANSFERRING THESE TO LANDLORD NAME UPON RECEIPT OF CERTIFICATE OF OCCUPANCY.

COORDINATE ALL UTILITES WITH TENANT APPROVED INTERIOR FINISHED-OUT DRAWINGS PRIOR TO COMMENCEMENT OF WORK.

COORDINATE EXACT LOCATION OF ALL EQUIPMENT, WIREWAYS, PANELS, ETC. WITH UTILITY COMPANIES/ OWNER PRIOR TO INSTALLATION.

CONTRACTOR TO PAINT ALL EXTERIOR GUTTERS, PANEL COVERS, CONDUIT, CABINETS, ETC. TO MATCH BACK OF BUILDING.

ALL ELECTRIC SHALL BE IN UL APPROVED RACEWAY.



1 ELECTRICAL FLOOR PLAN - BLDG 'A'

SCALE: 1/8" = 1'-0"

GENERAL NOTES

1. PROVIDE PULL STRINGS IN ALL EMPTY CONDUITS.
2. ALL JUNCTION BOXES, CONDUITS, AND WIRES SHALL BE SIZED PER NEC.
3. PROVIDE A CONSTANT HOT FROM PANEL BOARD DIRECTLY TO ALL EMERGENCY BATTERY PACKS/BALLASTS IN EMERGENCY LIGHTING FIXTURES AND EXIT SIGNS.
4. REFER TO ARCHITECTURAL DRAWINGS FOR EXACT LOCATION & MOUNTING HEIGHTS OF ALL LIGHTING FIXTURES SHOWN ON THIS DRAWING.
5. REFER TO SHEET E3.0 FOR SYMBOLS, SPECIFICATIONS AND ABBREVIATIONS.
6. ALL DEVICES AND EQUIPMENT OUTSIDE THE SCOPE OF WORK ARE EXISTING TO REMAIN U.O.N.
7. ELECTRICAL CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY PROBLEMS PERTAINING TO CIRCUIT AVAILABILITY OR LOAD CAPACITY PRIOR TO INSTALLATION.
8. EXTERIOR LIGHTING FIXTURES SHALL BE CONTROLLED VIA PHOTO CELL/TIME SWITCH AND AN OVERRIDE SWITCH. ALL EXTERIOR LUMINAIRES AND ELECTRICAL DEVICES SHALL BE LISTED AS WEATHERPROOF TYPE.

KEYED NOTES

1. REFER TO CIVIL DRAWINGS AND SHEET E2.0 FOR CONTINUATION OF CONDUIT AND MORE INFORMATION.
2. ROUTE LIGHTING BRANCH CIRCUIT THRU LIGHTING CONTACTOR IN LIGHTING CONTROL CABINET "LCCA". SEE PANEL SCHEDULES AND DETAIL 1/E3.0 FOR MORE INFORMATION.
3. PROVIDE (1) 2" EMPTY CONDUIT WITH PULL WIRE FOR FUTURE ELECTRICAL SERVICE. ROUTE AT BAR JOIST LEVEL. CONTRACTOR TO COORDINATE TERMINATION OF CONDUIT WITH OWNER PRIOR TO INSTALLATION, AND TO CAP AND TAG EACH END.
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Date issued/revised

14 SEP 2018 FOR PERMIT & REVIEW
NOVEMBER 12, 2018 REVISIONS 1
15 MAR 2019 FOR PERMIT
13 MAY 2019 BLDG PERMIT COMMENTS 3
02 JUL 2019 FOR CONSTRUCTION

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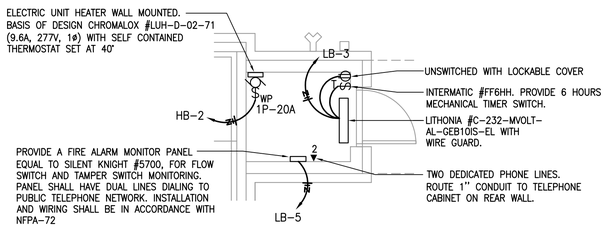
HUTTO, TX 78634

Project No.	18064
Drawn	MG
Checked	IM

ELECTRICAL FLOOR PLAN

Sheet No. E1.0



2 ENLARGED SPRINKLER RM. - BLDG. 'B'
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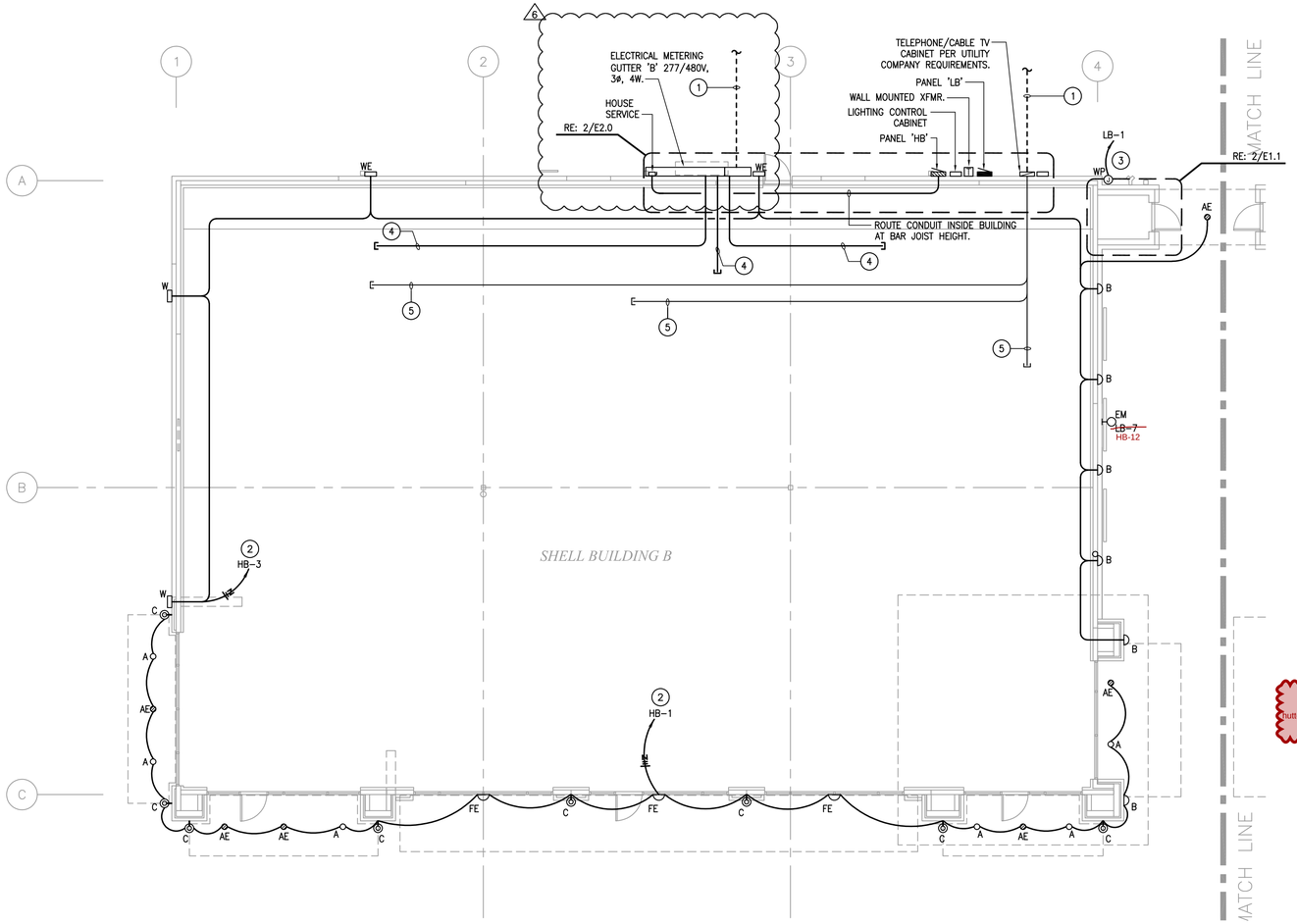

1 ELECTRICAL FLOOR PLAN - BLDG 'B'
SCALE: 1/8" = 1'-0"

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3. WEATHERPROOF JUNCTION BOX FOR IRRIGATION CONTROLLER. CONTRACTOR TO COORDINATE EXACT LOCATION AND OTHER REQUIREMENTS WITH LANDSCAPE CONTRACTOR PRIOR TO INSTALLATION.
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25 OCT 2019 ELECTRICAL REVISIONS 6

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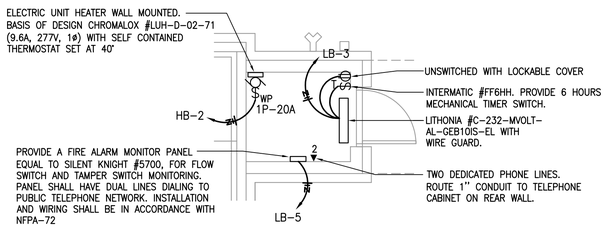
ELECTRICAL FLOOR PLAN

Sheet No. E1.1



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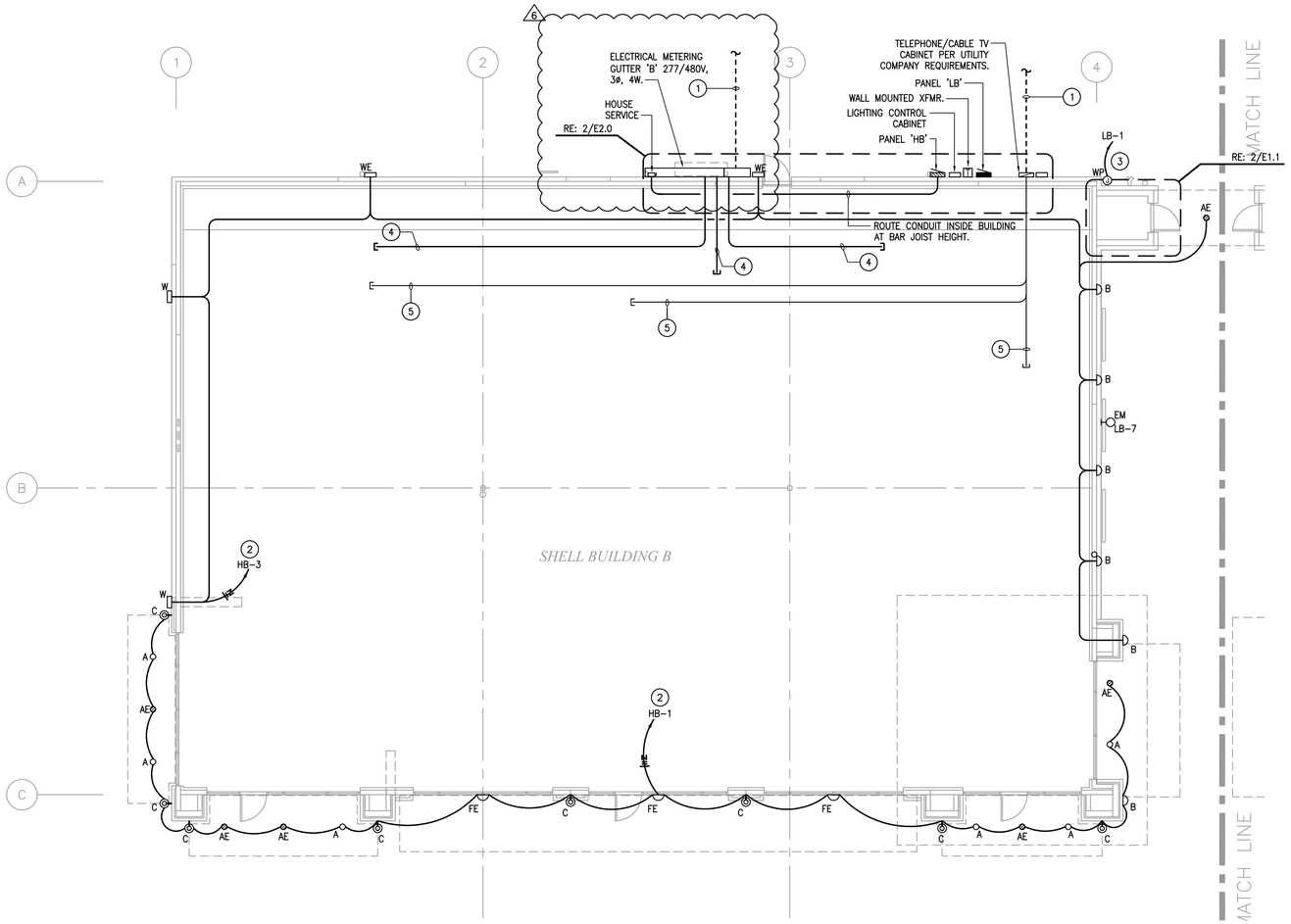

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SCALE: 1/8" = 1'-0"

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ELECTRICAL FLOOR PLAN

Sheet No. E1.1

CONTRACTOR TO FIELD VERIFY EXACT LOCATION OF MAIN ELECTRICAL SERVICE AND TELEPHONE DEMARC LOCATION, AND TO COORDINATE WITH UTILITY COMPANIES PRIOR TO BIDDING AND COMMENCEMENT OF WORK.

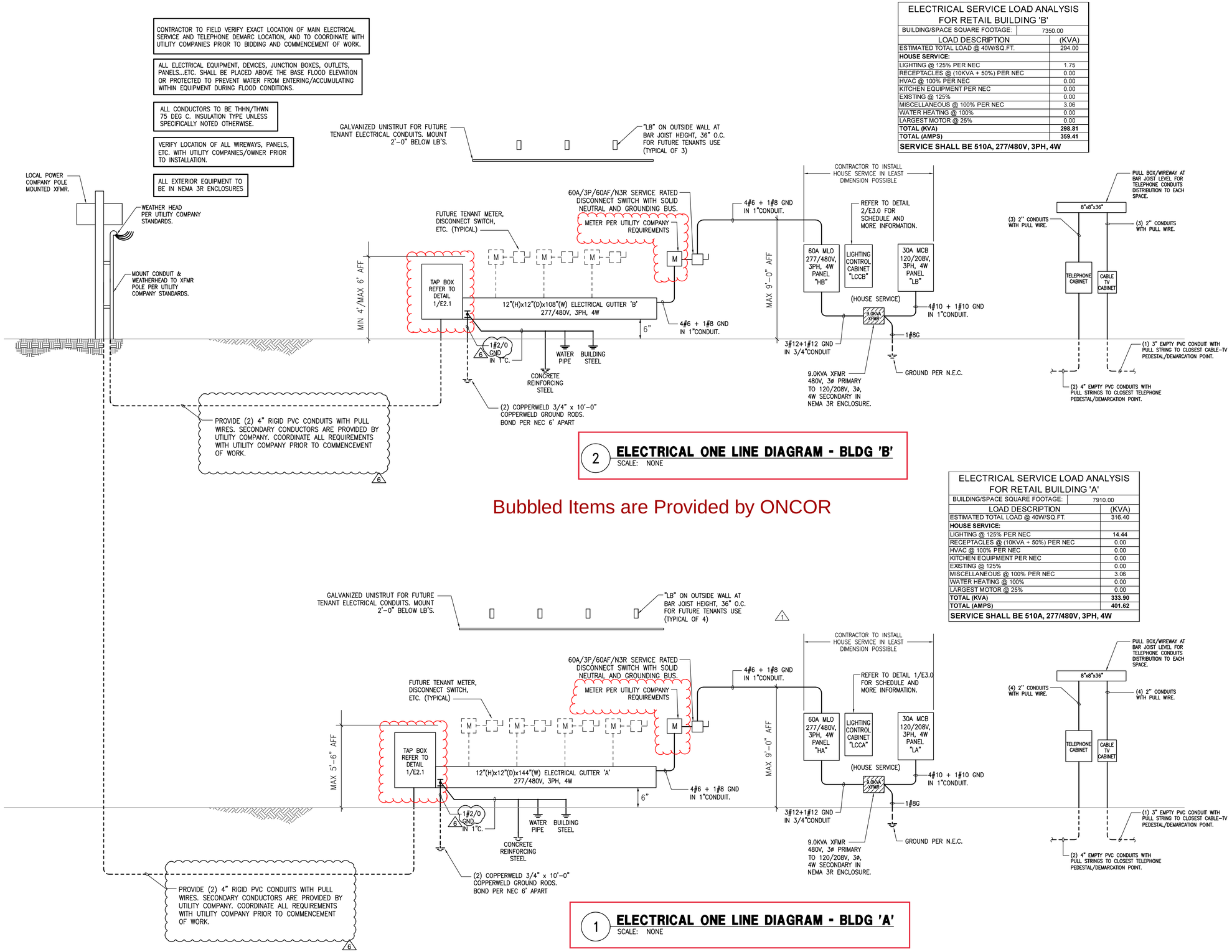
ALL ELECTRICAL EQUIPMENT, DEVICES, JUNCTION BOXES, OUTLETS, PANELS...ETC. SHALL BE PLACED ABOVE THE BASE FLOOD ELEVATION OR PROTECTED TO PREVENT WATER FROM ENTERING/ACCUMULATING WITHIN EQUIPMENT DURING FLOOD CONDITIONS.

ALL CONDUCTORS TO BE THHN/THWN 75 DEG C. INSULATION TYPE UNLESS SPECIFICALLY NOTED OTHERWISE.

VERIFY LOCATION OF ALL WIREWAYS, PANELS, ETC. WITH UTILITY COMPANIES/OWNER PRIOR TO INSTALLATION.

ALL EXTERIOR EQUIPMENT TO BE IN NEMA 3R ENCLOSURES

ELECTRICAL SERVICE LOAD ANALYSIS FOR RETAIL BUILDING 'B'	
BUILDING/SPACE SQUARE FOOTAGE:	7350.00
LOAD DESCRIPTION	(KVA)
ESTIMATED TOTAL LOAD @ 40W/SQ.FT.	294.00
HOUSE SERVICE:	
LIGHTING @ 125% PER NEC	1.75
RECEPTACLES @ (10KVA + 50%) PER NEC	0.00
HVAC @ 100% PER NEC	0.00
KITCHEN EQUIPMENT PER NEC	0.00
EXISTING @ 125%	0.00
MISCELLANEOUS @ 100% PER NEC	3.06
WATER HEATING @ 100%	0.00
LARGEST MOTOR @ 25%	0.00
TOTAL (KVA)	**298.81**
TOTAL (AMPS)	**359.41**
SERVICE SHALL BE 510A, 277/480V, 3PH, 4W	



2 ELECTRICAL ONE LINE DIAGRAM - BLDG 'B'
SCALE: NONE

Bubbled Items are Provided by ONCOR

ELECTRICAL SERVICE LOAD ANALYSIS FOR RETAIL BUILDING 'A'	
BUILDING/SPACE SQUARE FOOTAGE:	7910.00
LOAD DESCRIPTION	(KVA)
ESTIMATED TOTAL LOAD @ 40W/SQ.FT.	316.40
HOUSE SERVICE:	
LIGHTING @ 125% PER NEC	14.44
RECEPTACLES @ (10KVA + 50%) PER NEC	0.00
HVAC @ 100% PER NEC	0.00
KITCHEN EQUIPMENT PER NEC	0.00
EXISTING @ 125%	0.00
MISCELLANEOUS @ 100% PER NEC	3.06
WATER HEATING @ 100%	0.00
LARGEST MOTOR @ 25%	0.00
TOTAL (KVA)	**333.90**
TOTAL (AMPS)	**401.62**
SERVICE SHALL BE 510A, 277/480V, 3PH, 4W	

1 ELECTRICAL ONE LINE DIAGRAM - BLDG 'A'
SCALE: NONE

Date issued/revised

14 SEP 2018 FOR PERMIT & REVIEW
NOVEMBER 12, 2018 REVISIONS 1
NOVEMBER 14, 2018 FOR PRICING
15 MAR 2019 FOR PERMIT
02 JUL 2019 FOR CONSTRUCTION
25 OCT 2019 ELECTRICAL REVISIONS 6

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5/26/2020

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Project No.	18064
Drawn	MG
Checked	IM

ELECTRICAL ONE LINE DIAGRAM - BLDG. 'A' & 'B'

Sheet No. E2.0

NEW PANELBOARD SCHEDULE — HA

VOLTAGE	PHASE	WIRE	MCB (A)	MLO (A)	AIC RATING	MOUNTING	LOCATION	NEMA ENCLOSURE
277 480	3	4		60	22,000	SURFACE	-	3R

LOAD TYPE LEGEND				REMARKS
L	LIGHTING/CONT-LD	K	KITCHEN EQUIP	PROVIDE EQUIPMENT GROUNDING BUS AND FEED THRU AND/OR SUB FEED LUGS
R	RECEPTACLES	E	EXISTING	PROVIDE (2) SECTIONS PANEL EACH SECTION IS 42 POLES
M	MECHANICAL EQUIP	O	OTHER/MISC	

CKT #	LOAD DESCRIPTION	LOAD TYPE	WIRE SIZE	CONDUIT SIZE	CIRCUIT BREAKER TRIP	CIRCUIT BREAKER P	LOAD (VA)	PHASE	LOAD (VA)	CIRCUIT BREAKER P	CIRCUIT BREAKER TRIP	CONDUIT SIZE	WIRE SIZE	LOAD TYPE	LOAD DESCRIPTION	CKT #
1	CANOPY LTG	L	#10	3/4"	20A	1	800	A	1200	3	30A	1"	#8	L	MONUMENT SIGN	2
3	WALL PACKS LTG	L	#10	3/4"	20A	1	250	B	1200						-	4
5	SITE LIGHTING	L	#8	1"	20A	2	2125	C	1200						-	6
7	-				-		2125	A	2660	1	20A	3/4"	#10	O	SPRINKLER RM UNIT HEATER	8
9	SITE LIGHTING (NL)	L	#8	1"	20A	2	1125	B	0	1	20A				SPARE	10
11					-		1125	C	200	1	20A	3/4"	#12	L	EMERG LIGHT	12
13	SPARE				20A	1	0	A	0	3	20A	SEE RISER		O	9KVA XFMR	14
15	SPARE				20A	1	0	B							PANEL "LA"	16
17	SPARE				20A	1	0	C							-	18
19	SPARE				20A	1	0	A							SPACE	20
21	SPARE				20A	1	0	B							SPACE	22
23	SPARE				20A	1	0	C							SPACE	24
25	SPARE				20A	1	0	A							SPACE	26
27	SPARE				20A	1	0	B							SPACE	28
29	SPARE				20A	1	0	C							SPACE	30

	A	B	C	TOTAL
CONNECTED LOAD ABOVE (VA)	6785	2575	4650	14010
CONNECTED AMPACITY ABOVE (A)	24.49	9.30	16.79	

LOAD TYPE	CONN. LD(VA)	SUBPANELS (VA) LA	PNL	PNL	PNL	CONN. LD (VA)	SIZING FACTOR	SIZING LOAD (VA)	
LIGHTING/CONT-LD	11350	200	-	-	-	11550	125%	14438	
RECEPTACLES	0	0	-	-	-	0	*	0	
MECHANICAL EQU	0	0	-	-	-	0	100%	0	
KITCHEN EQUIP	0	0	-	-	-	0	100%	0	
#OF KITCHEN EQU	0	0	-	-	-	0	**		
EXISTING	0	0	-	-	-	0	125%	0	
OTHER/MISC	2660	400	-	-	-	3060	100%	3060	
TOTAL CONNECTED (VA)						14610		17498	SIZING TOTAL (VA) PER NEC
CONNECTED AMPACITY (A)						17.57		21.05	SIZING AMPACITY (A) PER NEC

NOTES
* 1ST 10KVA @ 100%, REMAINING @ 50%
** SIZE PER NEC TABLE 220.56
*** NON-SIMULTANEOUS LOAD
G: PROVIDE GFI CIRCUIT BREAKER
S: PROVIDE SHUNT TRIP CIRCUIT BREAKER
L: PROVIDE LOCK-ON CIRCUIT BREAKER

NEW PANELBOARD SCHEDULE — LA

VOLTAGE	PHASE	WIRE	MCB (A)	MLO (A)	AIC RATING	MOUNTING	LOCATION	NEMA ENCLOSURE
120 208	3	4	30		10,000	SURFACE	-	3R

LOAD TYPE LEGEND				REMARKS
L	LIGHTING/CONT-LD	K	KITCHEN EQUIP	PROVIDE EQUIPMENT GROUNDING BUS AND FEED THRU AND/OR SUB FEED LUGS
R	RECEPTACLES	E	EXISTING	PROVIDE (2) SECTIONS PANEL EACH SECTION IS 42 POLES
M	MECHANICAL EQUIP	O	OTHER/MISC	

CKT #	LOAD DESCRIPTION	LOAD TYPE	WIRE SIZE	CONDUIT SIZE	CIRCUIT BREAKER TRIP	CIRCUIT BREAKER P	LOAD (VA)	PHASE	LOAD (VA)	CIRCUIT BREAKER P	CIRCUIT BREAKER TRIP	CONDUIT SIZE	WIRE SIZE	LOAD TYPE	LOAD DESCRIPTION	CKT #
1	~~SPARE~~				20A	1	0	A	0	1	20A				SPARE	2
3	SPRINKLER RM LTG/REC	L	#10	3/4"	20A	1	200	B	0	1	20A				SPARE	4
5	FACP	O	#10	3/4"	20A	1	400	C	0	1	20A				SPARE	6
7	SPARE				20A	1	0	A	0	1	20A				SPARE	8
9	SPARE				20A	1	0	B	0	1	20A				SPARE	10
11	SPARE				20A	1	0	C	0	1	20A				SPARE	12
13	SPARE				20A	1	0	A	0	1	20A				SPARE	14
15	SPARE				20A	1	0	B	0	1	20A				SPARE	16
17	SPARE				20A	1	0	C	0	1	20A				SPARE	18

Service Receptacle

	A	B	C	TOTAL
CONNECTED LOAD ABOVE (VA)	0	200	400	600
CONNECTED AMPACITY ABOVE (A)	0.00	1.67	3.33	

LOAD TYPE	CONN. LD(VA)	SUBPANELS (VA) PNL	PNL	PNL	PNL	CONN. LD (VA)	SIZING FACTOR	SIZING LOAD (VA)	
LIGHTING/CONT-LD	200	-	-	-	-	200	125%	250	
RECEPTACLES	0	-	-	-	-	0	*	0	
MECHANICAL EQU	0	-	-	-	-	0	100%	0	
KITCHEN EQUIP	0	-	-	-	-	0	100%	0	
#OF KITCHEN EQU	0	-	-	-	-	0	**		
EXISTING	0	-	-	-	-	0	125%	0	
OTHER/MISC	400	-	-	-	-	400	100%	400	
TOTAL CONNECTED (VA)						600		650	SIZING TOTAL (VA) PER NEC
CONNECTED AMPACITY (A)						1.67		1.80	SIZING AMPACITY (A) PER NEC

NOTES
* 1ST 10KVA @ 100%, REMAINING @ 50%
** SIZE PER NEC TABLE 220.56
*** NON-SIMULTANEOUS LOAD
G: PROVIDE GFI CIRCUIT BREAKER
S: PROVIDE SHUNT TRIP CIRCUIT BREAKER
L: PROVIDE LOCK-ON CIRCUIT BREAKER

NEW PANELBOARD SCHEDULE — HB

VOLTAGE	PHASE	WIRE	MCB (A)	MLO (A)	AIC RATING	MOUNTING	LOCATION	NEMA ENCLOSURE
277 480	3	4		60	22,000	SURFACE	-	3R

LOAD TYPE LEGEND				REMARKS
L	LIGHTING/CONT-LD	K	KITCHEN EQUIP	PROVIDE EQUIPMENT GROUNDING BUS AND FEED THRU AND/OR SUB FEED LUGS
R	RECEPTACLES	E	EXISTING	PROVIDE (2) SECTIONS PANEL EACH SECTION IS 42 POLES
M	MECHANICAL EQUIP	O	OTHER/MISC	

CKT #	LOAD DESCRIPTION	LOAD TYPE	WIRE SIZE	CONDUIT SIZE	CIRCUIT BREAKER TRIP	CIRCUIT BREAKER P	LOAD (VA)	PHASE	LOAD (VA)	CIRCUIT BREAKER P	CIRCUIT BREAKER TRIP	CONDUIT SIZE	WIRE SIZE	LOAD TYPE	LOAD DESCRIPTION	CKT #
1	CANOPY LTG	L	#10	3/4"	20A	1	800	A	2660	1	20A	3/4"	#10	O	SPRINKLER RM UNIT HEATER	2
3	WALL PACKS LTG	L	#10	3/4"	20A	1	400	B							SPACE	4
5	SPARE				20A	2	0	C							SPACE	6
7	-				-		0	A							SPACE	8
9	SPARE				20A	2	0	B							SPACE	10
11					-		0	C							SPACE	12
13	SPARE				20A	1	0	A	0	3	20A	SEE RISER		O	9KVA XFMR	14
15	SPARE				20A	1	0	B							PANEL "LB"	16
17	SPARE				20A	1	0	C							-	18

Exist. Emergency Lighting

	A	B	C	TOTAL
CONNECTED LOAD ABOVE (VA)	3460	400	0	3860
CONNECTED AMPACITY ABOVE (A)	12.49	1.44	0.00	

LOAD TYPE	CONN. LD(VA)	SUBPANELS (VA) LB	PNL	PNL	PNL	CONN. LD (VA)	SIZING FACTOR	SIZING LOAD (VA)	
LIGHTING/CONT-LD	1200	200	-	-	-	1400	125%	1750	
RECEPTACLES	0	0	-	-	-	0	*	0	
MECHANICAL EQU	0	0	-	-	-	0	100%	0	
KITCHEN EQUIP	0	0	-	-	-	0	100%	0	
#OF KITCHEN EQU	0	0	-	-	-	0	**		
EXISTING	0	0	-	-	-	0	125%	0	
OTHER/MISC	2660	400	-	-	-	3060	100%	3060	
TOTAL CONNECTED (VA)						4460		4810	SIZING TOTAL (VA) PER NEC
CONNECTED AMPACITY (A)						5.36		5.79	SIZING AMPACITY (A) PER NEC

NOTES
* 1ST 10KVA @ 100%, REMAINING @ 50%
** SIZE PER NEC TABLE 220.56
*** NON-SIMULTANEOUS LOAD
G: PROVIDE GFI CIRCUIT BREAKER
S: PROVIDE SHUNT TRIP CIRCUIT BREAKER
L: PROVIDE LOCK-ON CIRCUIT BREAKER

NEW PANELBOARD SCHEDULE — LB

VOLTAGE	PHASE	WIRE	MCB (A)	MLO (A)	AIC RATING	MOUNTING	LOCATION	NEMA ENCLOSURE
120 208	3	4	30		10,000	SURFACE	-	3R

LOAD TYPE LEGEND				REMARKS
L	LIGHTING/CONT-LD	K	KITCHEN EQUIP	PROVIDE EQUIPMENT GROUNDING BUS AND FEED THRU AND/OR SUB FEED LUGS
R	RECEPTACLES	E	EXISTING	PROVIDE (2) SECTIONS PANEL EACH SECTION IS 42 POLES
M	MECHANICAL EQUIP	O	OTHER/MISC	

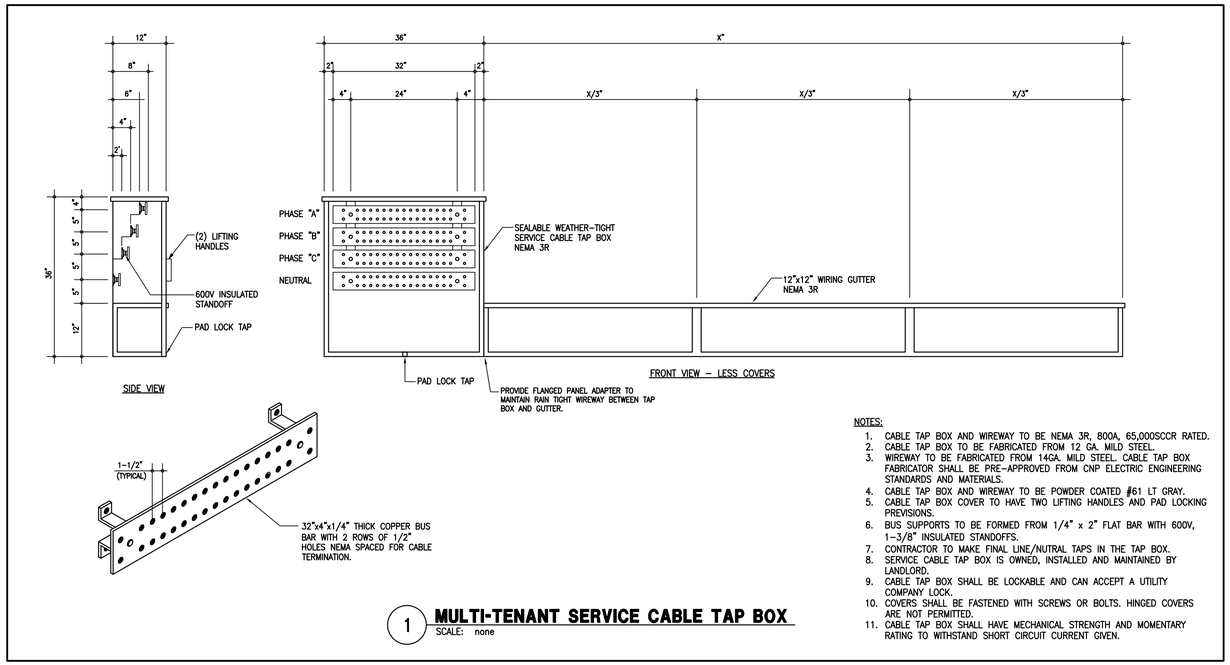
CKT #	LOAD DESCRIPTION	LOAD TYPE	WIRE SIZE	CONDUIT SIZE	CIRCUIT BREAKER TRIP	CIRCUIT BREAKER P	LOAD (VA)	PHASE	LOAD (VA)	CIRCUIT BREAKER P	CIRCUIT BREAKER TRIP	CONDUIT SIZE	WIRE SIZE	LOAD TYPE	LOAD DESCRIPTION	CKT #
1	~~IRRIGATION~~ RECEPT	R	#10	3/4"	20A	1	500	A	0	1	20A				~~SPARE~~	2
3	~~SPRINKLER RM LTG/REC~~	L	#10	3/4"	20A	1	200	B	0	1	20A				~~SPARE~~	4
5	~~FACP~~	O	#10	3/4"	20A	1	400	C	0	1	20A				~~SPARE~~	6
7	~~EMERGENCY LIGHTING~~	L	#12	3/4"	20A	1	200	A	0	1	20A				SPARE	8
9	SPARE				20A	1	0	B	0	1	20A				SPARE	10
11	SPARE				20A	1	0	C	0	1	20A				SPARE	12
13	SPARE				20A	1	0	A	0	1	20A				SPARE	14
15	SPARE				20A	1	0	B	0	1	20A				SPARE	16
17	SPARE				20A	1	0	C	0	1	20A				SPARE	18

Service Irrigation Receptacle
Spare Sprinkler RM Lighting/Receptacle
Spare Fire Alarm Panel
Spare

	A	B	C	TOTAL
CONNECTED LOAD ABOVE (VA)	700	200	400	1300
CONNECTED AMPACITY ABOVE (A)	5.83	1.67	3.33	

LOAD TYPE	CONN. LD(VA)	SUBPANELS (VA) PNL	PNL	PNL	PNL	CONN. LD (VA)	SIZING FACTOR	SIZING LOAD (VA)	
LIGHTING/CONT-LD	400	-	-	-	-	400	125%	500	
RECEPTACLES	500	-	-	-	-	500	*	500	
MECHANICAL EQU	0	-	-	-	-	0	100%	0	
KITCHEN EQUIP	0	-	-	-	-	0	100%	0	
#OF KITCHEN EQU	0	-	-	-	-	0	**		
EXISTING	0	-	-	-	-	0	125%	0	
OTHER/MISC	400	-	-	-	-	400	100%	400	
TOTAL CONNECTED (VA)						1300		1400	SIZING TOTAL (VA) PER NEC
CONNECTED AMPACITY (A)						3.61		3.89	SIZING AMPACITY (A) PER NEC

NOTES
* 1ST 10KVA @ 100%, REMAINING @ 50%
** SIZE PER NEC TABLE 220.56
*** NON-SIMULTANEOUS LOAD
G: PROVIDE GFI CIRCUIT BREAKER
S: PROVIDE SHUNT TRIP CIRCUIT BREAKER
L: PROVIDE LOCK-ON CIRCUIT BREAKER



1 **MULTI-TENANT SERVICE CABLE TAP BOX**
SCALE: none

NOTES:
1. CABLE TAP BOX AND WIREWAY TO BE NEMA 3R, 800A, 65,000SCCR RATED.
2. CABLE TAP BOX TO BE FABRICATED FROM 12 GA. MILD STEEL.
3. WIREWAY TO BE FABRICATED FROM 14GA. MILD STEEL. CABLE TAP BOX FABRICATOR SHALL BE PRE-APPROVED FROM CNP ELECTRIC ENGINEERING STANDARDS AND MATERIALS.
4. CABLE TAP BOX AND WIREWAY TO BE POWDER COATED #61 LT GRAY.
5. CABLE TAP BOX COVER TO HAVE TWO LIFTING HANDLES AND PAD LOCKING PREVISIONS.
6. BUS SUPPORTS TO BE FORMED FROM 1/4" x 2" FLAT BAR WITH 600V, 1-3/8" INSULATED STANDOFFS.
7. CONTRACTOR TO MAKE FINAL LINE/NUTRAL TAPS IN THE TAP BOX.
8. SERVICE CABLE TAP BOX IS OWNED, INSTALLED AND MAINTAINED BY LANDLORD.
9. CABLE TAP BOX SHALL BE LOCKABLE AND CAN ACCEPT A UTILITY COMPANY LOCK.
10. COVERS SHALL BE FASTENED WITH SCREWS OR BOLTS. HINGED COVERS ARE NOT PERMITTED.
11. CABLE TAP BOX SHALL HAVE MECHANICAL STRENGTH AND MOMENTARY RATING TO WITHSTAND SHORT CIRCUIT CURRENT GIVEN.

Date issued/revised

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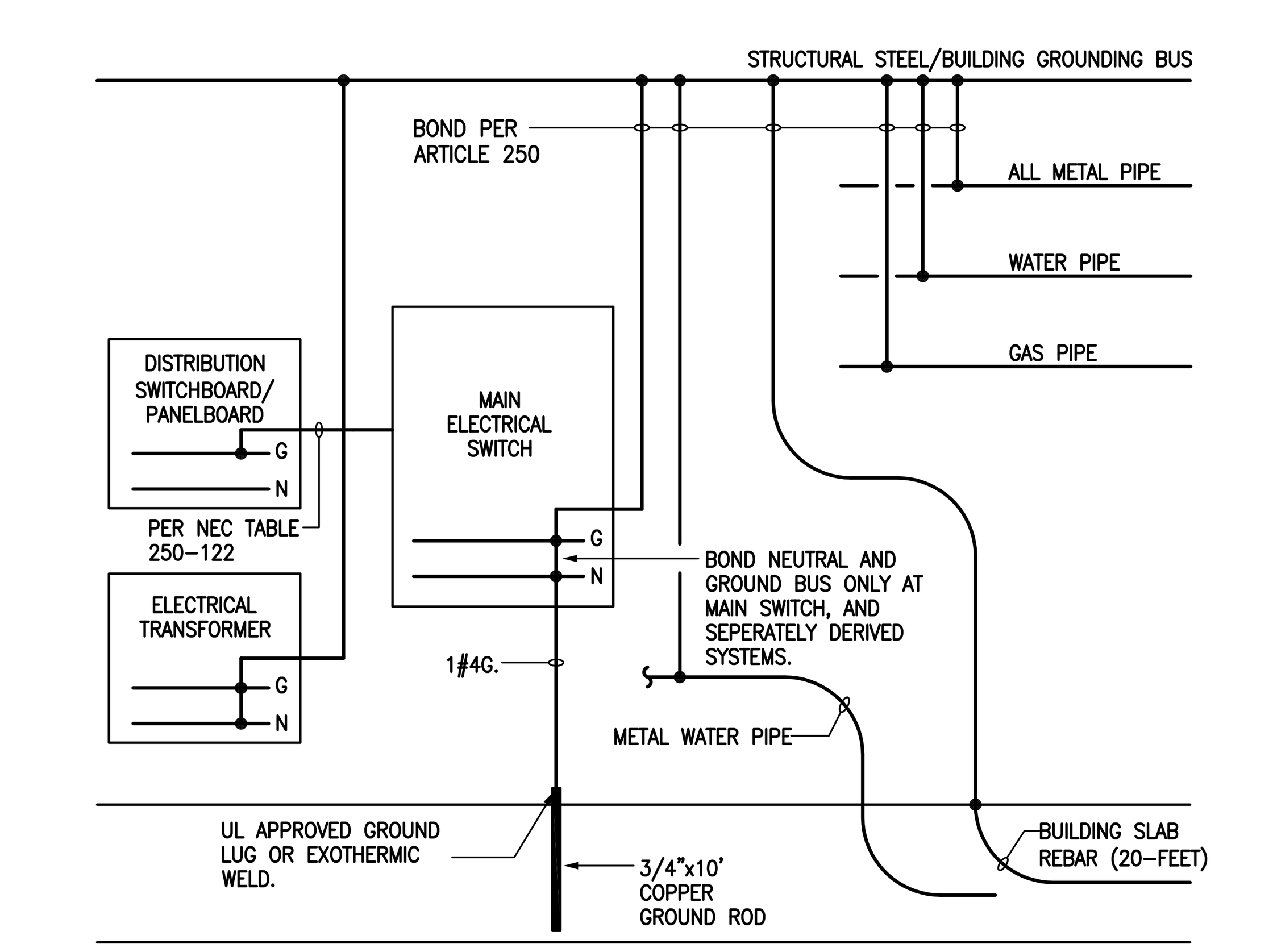
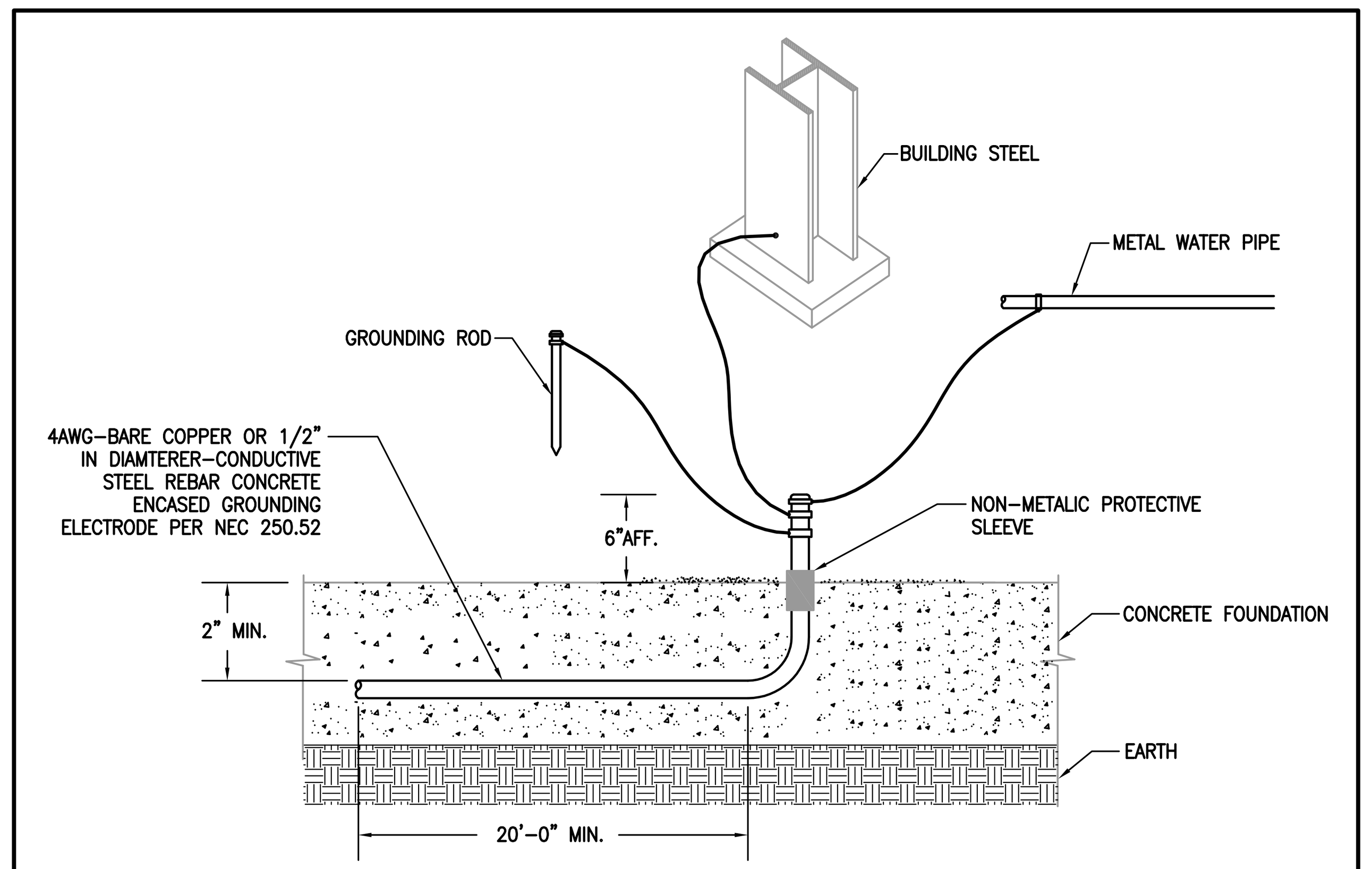
ELECTRICAL PANEL SCHEDULES, AND DETAIL

Sheet No. E2.1



4 **GROUNDING DETAIL**
SCALE: NONE



3 **CONCRETE ENCASED ELECTRODE ["UFER" GROUND] DETAIL**
SCALE: NONE

SYMBOL LEGEND

SYMBOL	DESCRIPTION (DISREGARD ITEMS NOT SHOWN ON PLANS)
LIGHTING (LETTER DENOTES TYPE - SEE LIGHT FIXTURE SCHEDULE)	
○	DOWNLIGHT FIXTURE
▭	LIGHT FIXTURE - WALL MOUNTED
RECEPTACLES AND OUTLETS	
⊖	DUPLEX RECEPTACLE
⊟	DUPLEX GROUND FAULT CIRCUIT INTERRUPTER RECEPTACLE
▦	DOUBLE DUPLEX GROUND FAULT CIRCUIT INTERRUPTER RECEPTACLE IN 2-GANG BOX WITH SINGLE COVER PLATE
Ⓙ	JUNCTION BOX
MOTOR CONTROLLERS AND EQUIPMENT	
☐	DISCONNECT SWITCH
$	1P-20A TOGGLE SWITCH U.O.N.
ELECTRICAL EQUIPMENT	
▨	277/480V PANELBOARD
▬	120/208V PANELBOARD
▭	TELEPHONE CABINET
CIRCUITING	
——	CONDUIT
- - - -	CONDUIT BELOW FLOOR, SLAB, OR GRADE
—╫Z→	3/4"C. UNLESS OTHERWISE NOTED; LONG HATCH = NEUTRAL; SHORT HATCH = PHASE; "Z" HATCH = INSULATED GROUND, NO HATCHES INDICATES 2 CONDUCTORS, ARROW INDICATES HOMERUN
——+	PARTIAL ELECTRICAL HOMERUN
SUBSCRIPTS AND ABBREVIATIONS	
GFCI	GROUND FAULT CIRCUIT INTERRUPTER
WP	INDICATES WEATHERPROOF
NL	LIGHT FIXTURE ON NIGHT LIGHT CIRCUIT
U.O.N.	UNLESS OTHERWISE NOTED

GENERAL NOTE:
ALL EXTERIOR BUILDING ELECTRICAL EQUIPMENT TO BE WEATHERPROOF

SPECIFICATIONS

GENERAL
* VERIFY ALL DIMENSIONS AT THE JOB SITE AND FROM THE ARCHITECTURAL PLANS.
* UNLESS OTHERWISE NOTED, CONTRACTOR AND SUBCONTRACTOR SHALL PAY FOR ALL PERMITS AND CHARGES REQUIRED AND SHALL COMPLY WITH ALL GOVERNING CODES AND ORDINANCES AND AUTHORITY HAVING JURISDICTION.
* VISITING THE SITE: EACH BIDDER SHALL VISIT THE SITE OF THE PROPOSED WORK AND SHALL FULLY INFORM HIMSELF REGARDING THE FACILITIES. NO ADDITIONAL COMPENSATION WILL BE ALLOWED FOR WORK OR MATERIAL OMITTED FROM THE BIDDER'S CONTRACT PROPOSAL DUE TO HIS FAILURE TO SO INFORM HIMSELF BY SUCH INVESTIGATION.
* ALL CHANNELING AND PATCHING OF ROOF, FLOOR, CEILING AND WALLS SHALL BE GENERAL CONTRACTOR.
* FURNISH AND INSTALL A COMPLETE ELECTRICAL SYSTEM AS INDICATED ON PLANS. ELECTRICAL CONTRACTOR TO MAKE ALL FINAL CONNECTIONS TO ALL EQUIPMENT. MATERIAL SHALL BE AS FOLLOWS:

CONDUIT:
* ALL CONDUITS, WEATHER HEAD, AND FITTINGS FROM THE UTILITY COMPANY POINT OF DELIVERY TO THE MAIN SERVICE DISCONNECT SWITCH/EQUIPMENT/GUTTER SHALL BE NON-METALLIC (PER POWER COMPANY STANDARDS). CONDUITS SHALL BE PVC SCHEDULE 40 UNLESS THEY ARE SUBJECTED TO PHYSICAL DAMAGE, PVC SCHEDULE 80 CONDUITS SHALL BE USED.
* ELECTRICAL CONDUCTORS SHALL BE INSTALLED IN CONDUIT COMPLYING WITH THE NATIONAL ELECTRICAL CODE. WHERE INSTALLED SUBJECT TO STRESS FROM COLLISION OR IMPACT, CONDUIT SHALL BE GALVANIZED RIGID STEEL. WHERE RIGID STEEL CONDUIT IS NOT REQUIRED, CONDUCTORS SHALL BE INSTALLED IN ELECTRICAL METALLIC TUBING WITH ELECTRO-GALVANIZING OUTSIDE AND ENAMEL INSIDE. TUBING SHALL BE BY "TRIANGLE" OR AN APPROVED SUBSTITUTION. LIQUID-TIGHT FLEXIBLE METAL CONDUIT SHALL BE USED AT ALL MOTOR CONNECTIONS OR WHERE MOVEMENT OR VIBRATION IS A CONCERN. UNLESS NOTED OTHERWISE, FLEXIBLE METAL CONDUIT MAY BE USED ONLY FOR CONNECTION TO LIGHTING FIXTURES, IN LENGTHS NOT TO EXCEED 6 (SIX) FEET. MINIMUM CONDUIT SIZE SHALL BE 1/2 INCH. MINIMUM SIZE FOR FLEXIBLE METAL CONDUIT SHALL BE 1/2 INCH. CONDUIT/CONDUCTOR FILL SHALL CONFIRM TO NATIONAL ELECTRICAL CODE, LATEST EDITION.
* CARLON PVC TYPE SCH. 40 HEAVY WALL CONDUIT WITH GROUND WIRE MAY BE USED BELOW FLOOR SLAB OR UNDERGROUND IN LIEU OF RIGID, THREADED, GALVANIZED CONDUIT. PVC SCH. 40 CONDUIT SHALL NOT BE RUN IN OR ABOVE FLOOR SLAB, OR IN TILT WALL PANELS. PVC CONDUIT SHALL TERMINATE BELOW FLOOR SLAB WITH RIGID, THREADED METAL CONDUIT ADAPTER. CONDUIT ABOVE SLAB SHALL BE METAL.
* A GROUND CONDUCTOR SHALL BE SUPPLIED IN NONMETALLIC CONDUIT OR ELECTRICAL METALLIC TUBING UTILIZING SET SCREW TYPE CONNECTORS. THE GROUND CONDUCTOR SHALL BE BARE, STRANDED, ANNEALED COPPER.
* CONDUIT TO BE SUPPORTED FROM JOIST. PROVIDED HANGERS, SUPPORTS AND FASTENINGS AS REQUIRED BY NATIONAL ELECTRICAL CODE DO NOT SUPPORT FROM ROOF DECK.
* PROVIDE PULL STRING IN ALL EMPTY CONDUITS.

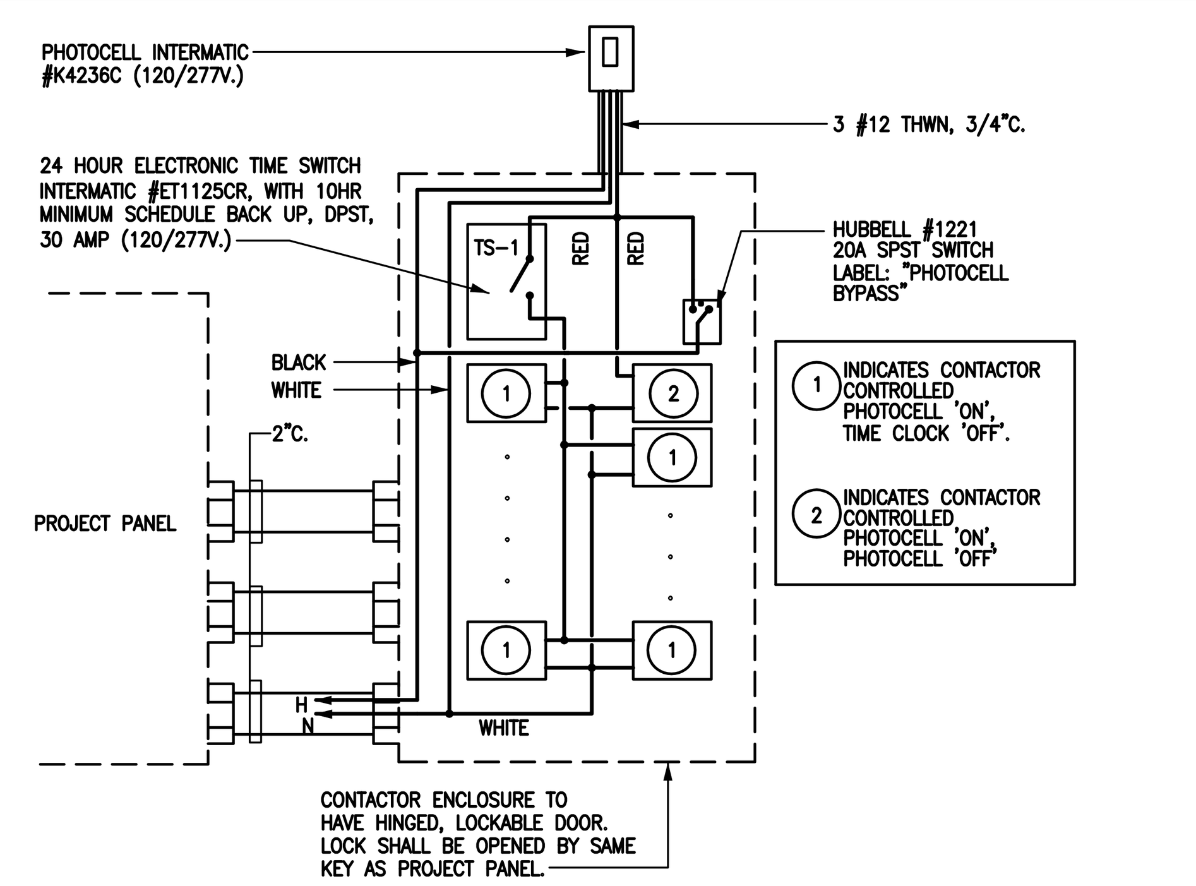
CONDUIT FITTINGS:
* ALL CONDUIT FITTINGS SHALL BE STEEL, SET SCREW OR COMPRESSION TYPE, INSULATED THROAT, UL LISTED. FITTINGS SHALL BE AS MANUFACTURED BY APPLETON ELECTRIC, OZ GEDNEY CO., ARROW CONDUIT AND FITTINGS CORP., OR EQUAL.

CONDUCTORS:
* ALL CONDUCTORS SHALL BE COPPER. EACH CONDUCTOR SHALL BE CONTINUOUS, WITHOUT WELD, SPLICE, OR JOIST THROUGHOUT ITS LENGTH, AND UNIFORM IN CROSS-SECTION. WIRE #6 AWG AND LARGER SHALL HAVE TYPE "THWN" INSULATION. WIRE #8 AWG AND SMALLER SHALL HAVE DUAL-RATED TYPE "THHN/THWN" INSULATION. MINIMUM WIRE SIZE, EXCEPT FOR CONTROL WIRING, SHALL BE #12 AWG. ALL WIRING INSIDE LIGHTING FIXTURES SHALL BE TEMPERATURE RATED PER THE NATIONAL ELECTRICAL CODE - 90 DEGREES C MINIMUM. BRANCH CIRCUIT WIRING WITHIN 3 INCHES OF FLUORESCENT BALLASTS SHALL BE TEMPERATURE RATED FOR 90 DEGREES C.

LIGHTING PANELBOARDS:
* 1. 120/208V, 3-PHASE' 4-WIRE OR 120/240V, 1-PHASE, 3-WIRE: FURNISH AND INSTALL AS SHOWN ON PLANS, LIGHTING PANELBOARDS BY SQUARE 'D' TYPE 'NQ', STYLE "Q", OR EQUAL WITH BOLT ON CIRCUIT BREAKERS OR AN APPROVED SUBSTITUTION. ALL BUSSING TO BE COPPER.
  2. 277/480V, 3-PHASE, 4-WIRE: FURNISH AND INSTALL AS SHOWN ON PLANS, LIGHTING PANELBOARDS BY SQUARE 'D', OR EQUAL TYPE "NF" WITH BOLT ON CIRCUIT BREAKERS OR AN APPROVED SUBSTITUTION. ALL BUSSING TO BE COPPER.

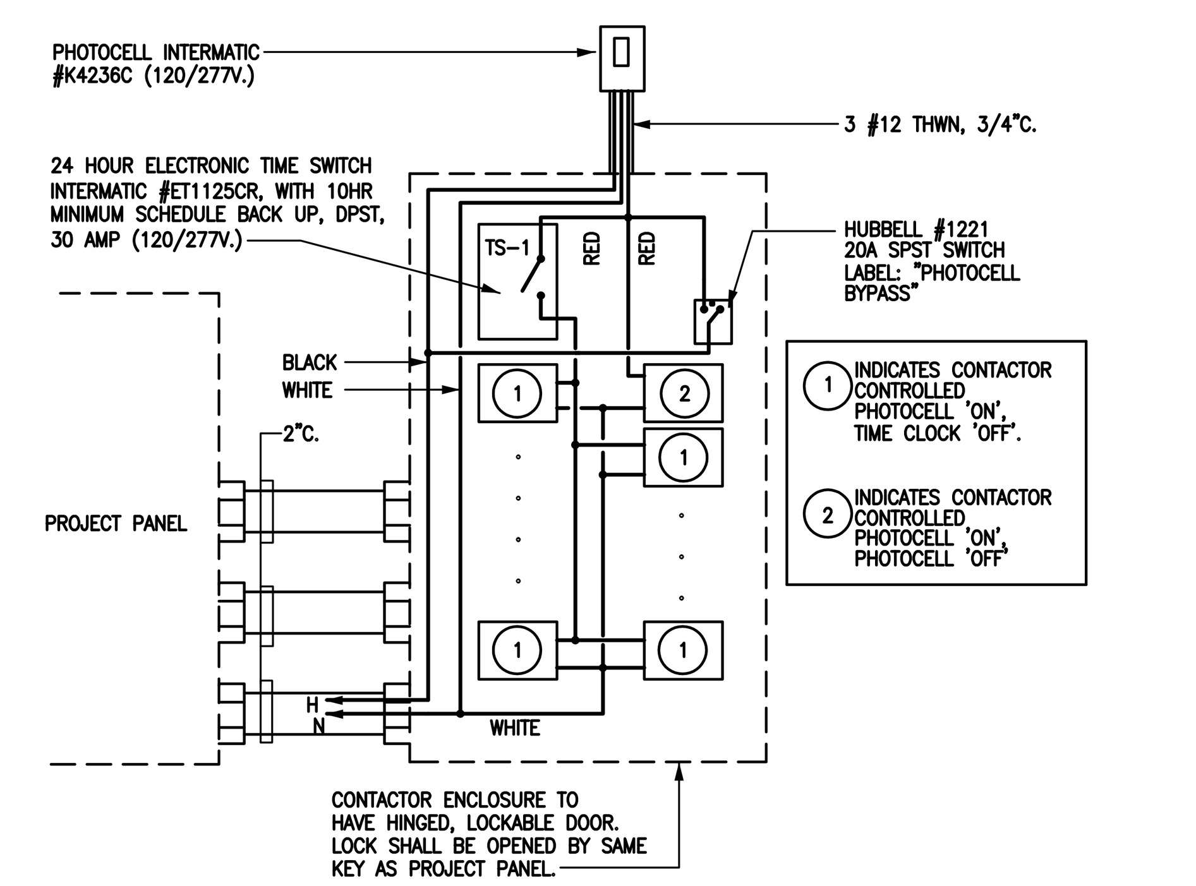
SAFETY SWITCHES:
* SAFETY SWITCHES SHALL BE FURNISHED AND INSTALLED AT ALL LOCATIONS INDICATED ON PLANS OR REQUIRED BY THE NATIONAL ELECTRICAL CODE. ALL SWITCHES SHALL BE HEAVY DUTY TYPE AND SHALL HAVE CLIPS FOR REJECTION TYPE FUSES AND SHALL BE BY SQUARE 'D', G.E., OR EQUAL, FOR THE VOLTAGE AND LOAD INVOLVED. PROVIDE A COMPLETE SET OF FUSES IN ALL FUSED SWITCHES. FUSES SHALL BE CLASS RK5 DUAL ELEMENT TIME DELAY FOR CIRCUITS UP TO 600 AMPS AND CLASS L (BUSSMAN "HI-CAP" KRP-C) FOR CIRCUITS ABOVE 600 AMPS.

TRANSFORMERS:
* FURNISH AND INSTALL G.E. TYPE "QL" OR EQUAL DRY TRANSFORMER WITH 2-1/2% CAPACITY TAPS ON THE PRIMARY WINDING (TWO ABOVE AND FOUR BELOW NORMAL VOLTAGE). TRANSFORMER SHALL BE RATED FOR 150 DEG. C. RISE ABOVE 40 DEG. C. AMBIENT DURING USE AND HAVE AN INSULATION SYSTEM RATED TO WITHSTAND 220 DEG. C. COPPER WINDINGS ONLY.



LIGHTING CONTROL CABINET SCHEDULE			LCCB	
DESCRIPTION	CIRCUIT NUMBER	CONTROL	CONTACTOR #	CONTACTOR TYPE
CANOPY LTG	HB-1	PHOTO CELL ON/TIME CLOCK OFF	1	2P-30A
WALL PACK LIGHTING	HB-3	PHOTO CELL ON/OFF	3	2P-30A
LIGHTING CONTROL CABINET SHALL BE PROVIDED IN NEMA 3R ENCLOSURE				
1.CONRACTOR TO COORDINATE WITH OWNER FOR EXACT TIME-SCHEDULE AND OTHER REQUIRMENTS PRIOR TO INSTALLATION.				

2 **BUILDING 'B'**
LIGHTING CONTROL CABINET DIAGRAM AND SCHEDULE
SCALE: NONE



LIGHTING CONTROL CABINET SCHEDULE			LCCA	
DESCRIPTION	CIRCUIT NUMBER	CONTROL	CONTACTOR #	CONTACTOR TYPE
CANOPY LTG	HA-1	PHOTO CELL ON/TIME CLOCK OFF	1	2P-30A
WALL PACK LIGHTING	HA-3	PHOTO CELL ON/OFF	3	6P-30A
SITE LIGHTING (NL)	HA-9,11			
LIGHTING CONTROL CABINET SHALL BE PROVIDED IN NEMA 3R ENCLOSURE				
NOTES: 1.CONRACTOR TO COORDINATE WITH OWNER FOR EXACT TIME-SCHEDULE AND OTHER REQUIRMENTS PRIOR TO INSTALLATION.				

1 **BUILDING 'A'**
LIGHTING CONTROL CABINET DIAGRAM AND SCHEDULE
SCALE: NONE

LIGHTING FIXTURE SCHEDULE

FIXTURE DESIGNATION	MANUFACTURER	CATALOG NO.	LAMP NO.	LAMP TYPE	LAMP COLOR	LAMP LUMENS	LAMP WATT	VOLT	BALLAST/DRIVER	INPUT WATTAGE	MOUNTING	LOCATION
A	GOTHAM	EVO-40/20-8AR-MWD-LD-277	1	LED	4000	2000	41	277	ELECTRONIC	43	RECESSED	EXTERIOR CANOPY
AE	GOTHAM	EVO-40/20-8AR-MWD-LD-277	1	LED	4000	2000	41	277	ELECTRONIC WITH EMERGENCY BATTERY PACK	43	RECESSED	EXTERIOR CANOPY
B	BEGA	33-344-LED	1	LED	4000	799	16.9	277	ELECTRONIC	18	WALL	EXTERIOR WALL SCONCE
C	BASELITE CORP.	LOUVERED SHADES L216-41-CL4-LED25W-4K-277-WM10	1	LED	4000	6000	25	277	ELECTRONIC	27	WALL	EXTERIOR WALL SCONCE
EM	LITHONIA	AFN-EXT	1	LED	-	-	10.8	277	ELECTRONIC WITH BATTERY BACK-UP	10.8	WALL	EMERGENCY LIGHTING
FE	LITHONIA	WSQ-LED-P2-40K-SR2-MVOLT	1	LED	4000	3000	29	277	ELECTRONIC WITH BATTERY BACK-UP	31	WALL	EXTERIOR CANOPY
W	LITHONIA	WST-LED-P3-40K-VW-MVOLT	1	LED	4000	6689	58	277	ELECTRONIC	58	WALL	EXTERIOR WALL PACK
WE	LITHONIA	WST-LED-P3-40K-VW-MVOLT-E7WH	1	LED	4000	6689	58	277	ELECTRONIC WITH BATTERY BACK-UP	58	WALL	EXTERIOR WALL PACK

THIS LIGHTING FIXTURE SCHEDULE IS FOR REFERENCE AND FINAL APPROVAL SHALL BE PER ARCHITECT

REFER TO ARCHITECTURAL PLANS FOR EXACT SPECIFICATIONS AND REQUIREMENTS OF ALL LIGHTING FIXTURES PRIOR TO PURCHASE AND INSTALLATION

Date issued/revised
14 SEP 2018 FOR PERMIT & REVIEW
NOVEMBER 14, 2018 FOR PRICING
15 MAR 2019 FOR PERMIT
02 JUL 2019 FOR CONSTRUCTION

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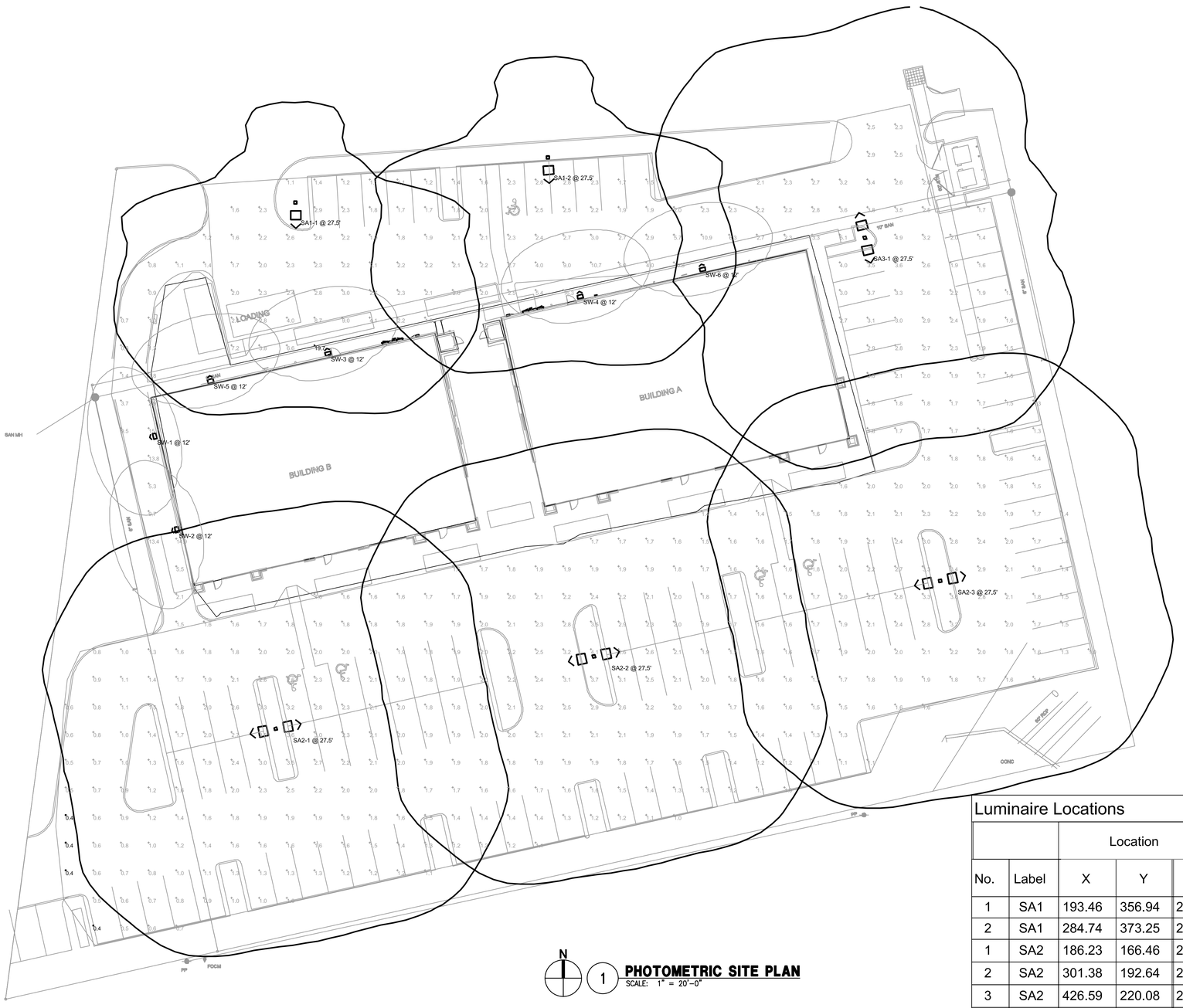
SHELL BUILDING & SITE WORK DEVELOPMENT

720/722 US 79 WEST TOWNWEST COMMONS
HUTTO, TX 78634

Project No. 18064
Drawn MG
Checked IM

ELECTRICAL SPECIFICATIONS, DETAILS AND LEGENDS

Sheet No. E3.0



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1 **PHOTOMETRIC SITE PLAN**
SCALE: 1" = 20'-0"

Schedule

Symbol	Label	Quantity	Manufacturer	Catalog Number	Description	Lamp	Number Lamps	Filename	Lumens Per Lamp	Light Loss Factor	Wattage
	SA1	2	Lithonia Lighting	DSX1 LED P6 40K TFTM MVOLT	DSX1 LED P6 40K TFTM MVOLT	LED	1	DSX1_LED_P6_40K_TFTM_MVOLT.ies	19037	0.94	163
	SA2	3	Lithonia Lighting	DSX1 LED P6 40K T5W MVOLT	DSX1 LED P6 40K T5W MVOLT	LED	1	DSX1_LED_P6_40K_T5W_MVOLT.ies	19635	0.94	326
	SA3	1	Lithonia Lighting	DSX1 LED P6 40K TFTM MVOLT	DSX1 LED P6 40K TFTM MVOLT	LED	1	DSX1_LED_P6_40K_TFTM_MVOLT.ies	19037	0.94	326
	SW	6	Lithonia Lighting	WST LED P3 40K VW HVOLT	WST LED, Performance package 3, 4000 K, visual comfort wide, HVOLT	LED	1	WST_LED_P3_40K_VW_HVOLT.ies	6689	0.94	58

Luminaire Locations

		Location						Aim		
No.	Label	X	Y	Z	MH	Orientation	Tilt	X	Y	Z
1	SA1	193.46	356.94	27.50	27.50	179.55	0.00	193.47	355.80	0.00
2	SA1	284.74	373.25	27.50	27.50	177.08	0.00	284.80	372.10	0.00
1	SA2	186.23	166.46	27.50	27.50	78.69	0.00			
2	SA2	301.38	192.64	27.50	27.50	78.69	0.00			
3	SA2	426.59	220.08	27.50	27.50	78.69	0.00			
1	SA3	399.37	344.20	27.50	27.50	347.07	0.00			
1	SW	143.16	272.50	12.00	12.00	256.95	0.00	142.86	272.43	0.00
2	SW	151.12	238.67	12.00	12.00	256.95	0.00	150.82	238.60	0.00
3	SW	205.30	301.62	12.00	12.00	346.61	0.00	205.23	301.93	0.00
4	SW	296.59	322.26	12.00	12.00	347.74	0.00	296.52	322.57	0.00
5	SW	162.90	291.75	12.00	12.00	346.61	0.00	162.82	292.06	0.00
6	SW	340.79	332.14	12.00	12.00	347.74	0.00	340.72	332.44	0.00

Statistics

Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min
Retail Site	+	2.2 fc	19.7 fc	0.4 fc	49.3:1	5.5:1

Date issued/revised

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02 JUL 2019 FOR CONSTRUCTION

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HUTTO, TX 78634

Project No. 18064
Drawn MG/KC
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PHOTOMETRIC SITE PLAN

Sheet No. EP0.1

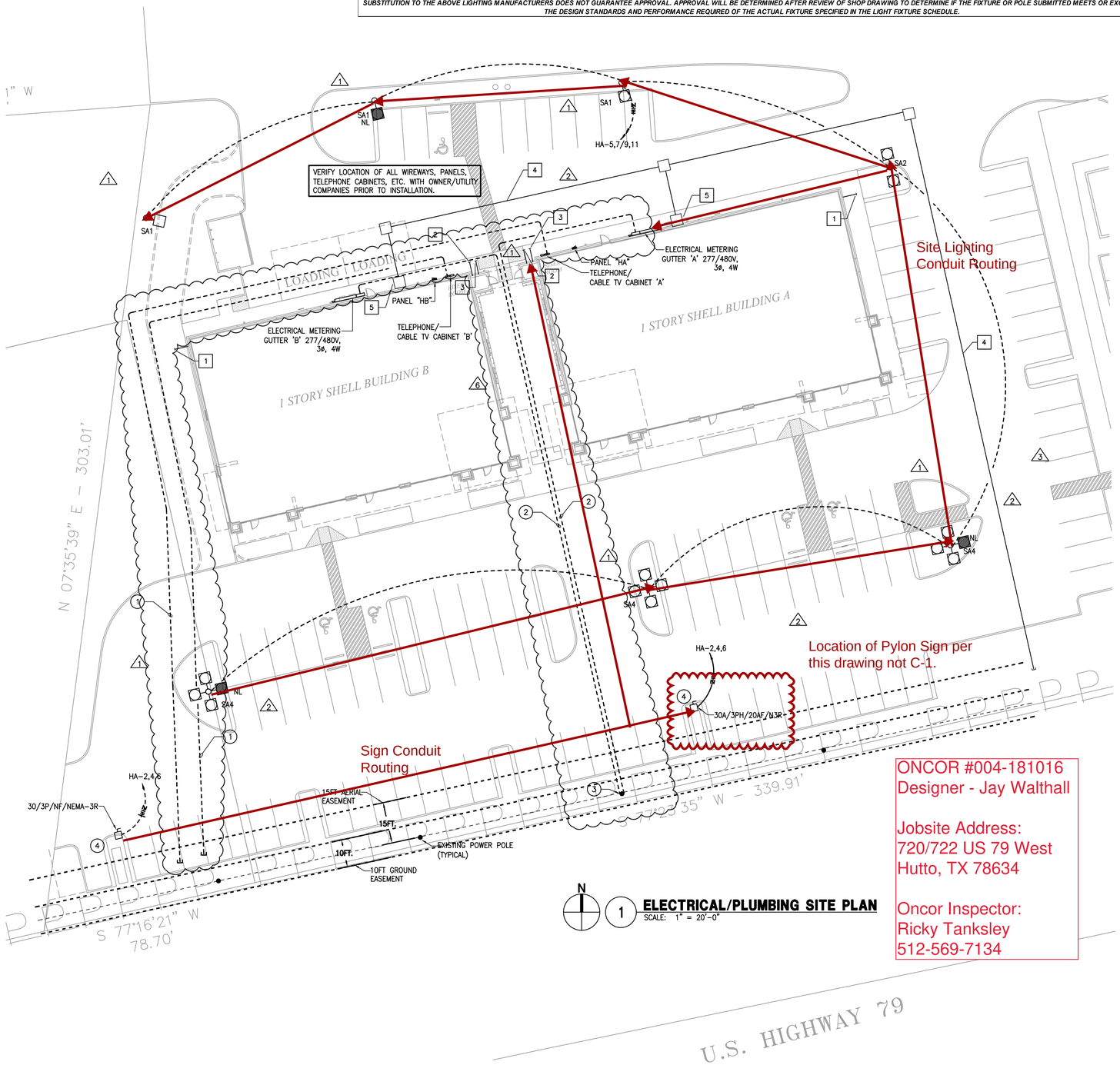
SITE LIGHTING FIXTURE SCHEDULE

FIXTURE DESIGNATION	MANUFACTURER	CATALOG NO.	FIXTURE NO.	FIXTURE TYPE	FIXTURE COLOR	FIXTURE LUMENS	FIXTURE WATT	VOLT	MOUNTING	INPUT WATTAGE	POLE DESCRIPTION
SA1	LITHONIA	DSX1-LED-P9-40K-TFTM-480	1	LED	4000K	27578	241	480	SINGLE POLE MOUNTED	250	MOUNT ON 25' POLE, ROUND TAPERED, POWDER-COATED OVER GALVANIZED STEEL, ON 2'-6" BASE. BASIS OF DESIGN: LITHONIA POLE# RTS-25-59B-DM28-PL-DDB
SA2	LITHONIA	DSX1-LED-P9-40K-TFTM-480	2	LED	4000K	27578	241	480	2-180 DEGREES POLE MOUNTED	500	MOUNT ON 25' POLE, ROUND TAPERED, POWDER-COATED OVER GALVANIZED STEEL, ON 2'-6" BASE. BASIS OF DESIGN: LITHONIA POLE# RTS-25-59B-DM28-PL-DDB
SA4	LITHONIA	DSX1-LED-P9-40K-T5W-480	4	LED	4000K	28445	241	480	4-90 DEGREES POLE MOUNTED	1000	MOUNT ON 25' POLE, ROUND TAPERED, POWDER-COATED OVER GALVANIZED STEEL, ON 2'-6" BASE. BASIS OF DESIGN: LITHONIA POLE# RTS-25-59B-DM28-PL-DDB

THIS LIGHTING FIXTURE SCHEDULE IS FOR REFERENCE AND FINAL APPROVAL SHALL BE PER ARCHITECT/OWNER

REFER TO CIVIL AND ARCHITECTURAL PLANS FOR EXACT SPECIFICATIONS AND REQUIREMENTS OF ALL LIGHTING POLES PRIOR TO PURCHASE AND INSTALLATION

SUBSTITUTION TO THE ABOVE LIGHTING MANUFACTURERS DOES NOT GUARANTEE APPROVAL. APPROVAL WILL BE DETERMINED AFTER REVIEW OF SHOP DRAWING TO DETERMINE IF THE FIXTURE OR POLE SUBMITTED MEETS OR EXCEEDS THE DESIGN STANDARDS AND PERFORMANCE REQUIRED OF THE ACTUAL FIXTURE SPECIFIED IN THE LIGHT FIXTURE SCHEDULE.



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1 **ELECTRICAL/PLUMBING SITE PLAN**
SCALE: 1" = 20'-0"

ONCOR #004-181016
Designer - Jay Walthall

Jobsite Address:
720/722 US 79 West
Hutto, TX 78634

Oncor Inspector:
Ricky Tanksley
512-569-7134

ELECTRICAL GENERAL NOTES

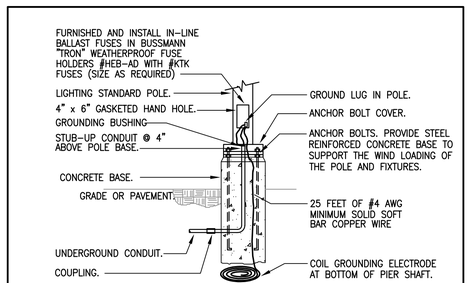
1. PROVIDE PULL STRINGS IN ALL EMPTY CONDUITS.
2. ALL JUNCTION BOXES, CONDUITS, AND WIRES SHALL BE SIZED PER NEC.
3. REFER TO SHEET DRAWINGS FOR SYMBOLS, SPECIFICATIONS AND ABBREVIATIONS.
4. ALL DEVICES AND EQUIPMENT OUTSIDE THE SCOPE OF WORK ARE EXISTING TO REMAIN U.O.N.
5. ELECTRICAL CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY PROBLEMS PERTAINING TO CIRCUIT AVAILABILITY OR LOAD CAPACITY PRIOR TO INSTALLATION.
6. ALL EXTERIOR ELECTRICAL DEVICES SHALL BE LISTED AS WEATHERPROOF TYPE.
7. MAINTAIN 15'-0" MINIMUM CLEARANCE BETWEEN OVERHEAD LINES AND LIGHTING POLES.

ELECTRICAL KEYED NOTES

1. PROVIDE (2) 4" AND (1) 3" RIGID PVC EMPTY CONDUITS WITH PULL STRINGS FOR TELEPHONE AND CABLE-TV SERVICES FROM EACH BUILDING TELEPHONE/ CABLE-TV CABINET TO CLOSEST SERVICE DEMARCATION POINT/PEDESTAL. COORDINATE WITH CIVIL DRAWINGS AND TELEPHONE/CABLE-TV COMPANY SERVING THE AREA FOR EXACT LOCATION AND CONDUIT TERMINATIONS. 6
2. PROVIDE (2) 4" CONDUITS FROM POLE MOUNTED TRANSFORMER TO EACH NEW SERVICE GUTTER/TAP BOX ((4) CONDUITS IN TOTAL), AS SHOWN FOR UNDERGROUND ELECTRICAL SERVICE CONDUCTORS. REFER TO ONE LINE FOR MORE INFORMATION. COORDINATE EXACT ROUTING AND ALL OTHER REQUIREMENTS WITH OTHER UNDERGROUND WORK, OWNER, UTILITY COMPANY, AND CIVIL ENGINEER PRIOR TO COMMENCEMENT OF WORK.
3. PROPOSED UTILITY TRANSFORMER POLE LOCATION. SERVICE SHALL BE 1020A, 277/480V, 3PH, 4W.
4. PROVIDE (1) 2" SPARE PVC CONDUIT WITH PULL WIRE, (1) WEATHERPROOF DISCONNECT SWITCH, AND 4#8 + 1#8GND IN 2" CONDUIT FOR FUTURE SIGNAGE (3-277V BRANCH CIRCUITS SHARING THE NEUTRAL). COORDINATE ROUTING, TERMINATION POINTS, AND OTHER REQUIREMENTS WITH OWNER/SIGN VENDOR PRIOR TO INSTALLATION. CONTRACTOR TO STUB UP SPARE CONDUIT 6" ABOVE GRADE LEVEL AT EACH END, AND TO TAG AND CAP EACH END.

PLUMBING KEYED NOTES

1. 6" SANITARY SEWER, CONTRACTOR TO MAKE CONNECTION AS NECESSARY TO SITE SANITARY SEWER PIPING. REFER TO CIVIL DRAWINGS FOR EXACT LOCATION.
2. 2" DOMESTIC COLD WATER AT 50 PSI MINIMUM, CONTRACTOR TO MAKE CONNECTION AS NECESSARY TO SITE DOMESTIC WATER PIPING. REFER TO CIVIL DRAWINGS FOR CONTINUATION.
3. 6" FIRE WATER SERVICE, CONTRACTOR TO MAKE CONNECTION AS NECESSARY TO SITE FIRE WATER PIPING. REFER TO CIVIL DRAWINGS FOR EXACT LOCATION.
4. PROVIDE 6" PVC SLEEVE FOR FUTURE NATURAL GAS PIPING BELOW GRADE. PROVIDE 4' X 4' LEAVE-OUT AT ALL 90° TURNS AND AT 100' INTERVALS. CONTRACTOR TO FILL IN LEAVE-OUTS AFTER GAS PIPING HAS BEEN INSTALLED. VERIFY EXACT DEMARCATION POINT WITH GAS COMPANY.
5. 4'X4' LEAVE-OUT IN CONCRETE FOR FUTURE NATURAL GAS PIPING/ METER. VERIFY EXACT LOCATION WITH OWNER PRIOR TO INSTALLATION.



NOTE:
REFER TO ARCHITECTURAL/ STRUCTURAL DRAWINGS FOR CONCRETE WORK.

2 **METAL POLE WITH CONCRETE ANCHOR BASE ELECTRICAL REQUIREMENTS**
SCALE: NONE

Date issued/revised

14 SEP 2018 FOR PERMIT & REVIEW
NOVEMBER 12, 2018 REVISIONS 1
NOVEMBER 14, 2018 FOR PRICING
15 MAR 2019 FOR PERMIT 2
02 JUL 2019 FOR CONSTRUCTION
12 AUG 2019 UTILITY REVISION 3
25 OCT 2019 ELECTRICAL REVISIONS 6

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HUTTO, TX 78634

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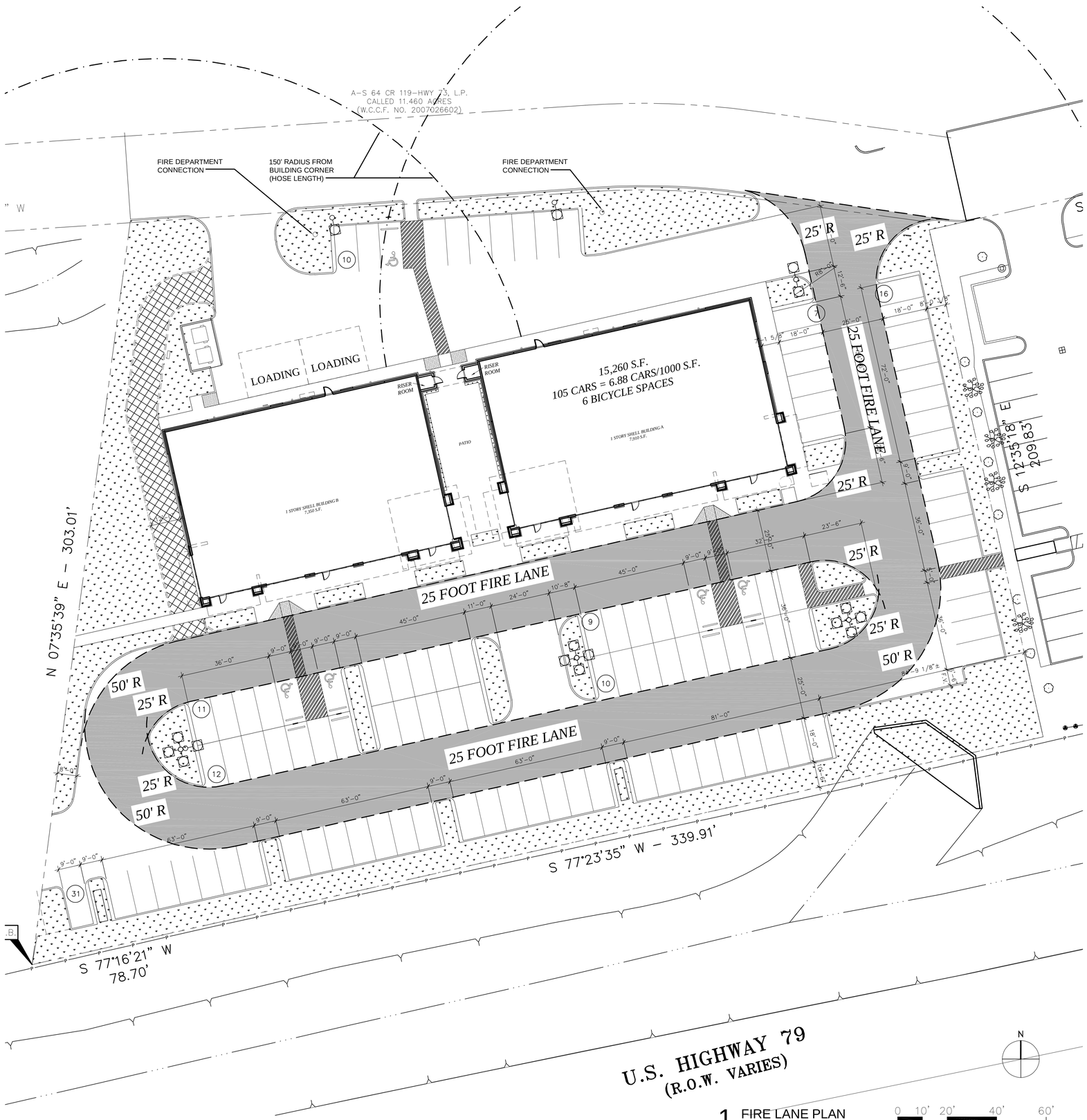
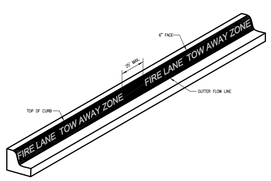
ELECTRICAL/PLUMBING SITE PLAN

Sheet No. EP1.0



1 FIRE LANE PLAN
1"= 20'-0"



NOTES:
FIRE LANE STRIPING TO BE 6" WIDE RED PAINT WITH "FIRE LANE TOW AWAY ZONE" IN 4" TALL WHITE LETTERS. WORDING MAY NOT BE SPACED GREATER THAN 25' APART. STRIPING TO BE PAINTED ON THE FACE OF CURB WHEN PRESENT AND PAINTED FLAT ON THE PARKING SURFACE WHEN IT IS NOT.

2 FIRE LANE MARKINGS
1"= 20'-0"

Date issued/revised

15 MAR 2019 FOR PERMIT 1
2 JUL 2019 FOR CONSTRUCTION

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5/26/2020

FIRE PREVENTION NOTES:

1. NO CONSTRUCTION OF COMBUSTIBLE MATERIALS SHALL TAKE PLACE UNTIL ALL FIRE HYDRANTS ARE INSTALLED AND OPERATIONAL.
2. THERE ARE NO OVERHEAD OBSTRUCTIONS LOWER THAN 13'-6".
3. ALL FIRE APPARATUS ACCESS ROADS SHALL BE CAPABLE OF SUPPORTING THE IMPOSED LOAD OF FIRE APPARATUS WEIGHING AT LEAST 75,000 POUNDS.

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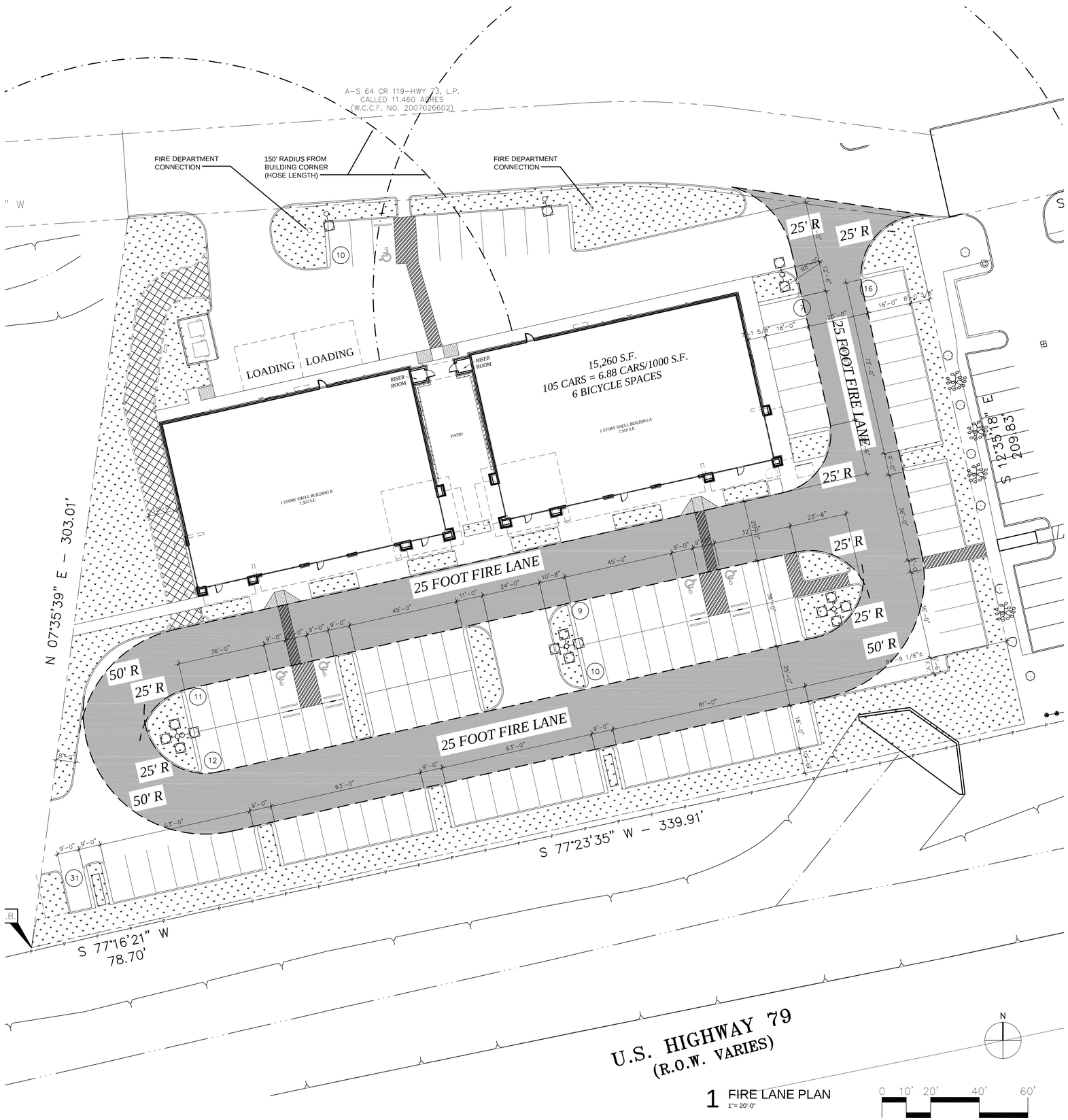
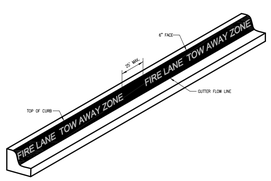
1

FIRE LANE PLAN

Sheet No. FL1.0



1 FIRE LANE PLAN
1"= 20'-0"



NOTES:
FIRE LANE STRIPING TO BE 6" WIDE RED PAINT WITH "FIRE LANE TOW AWAY ZONE" IN 4" TALL WHITE LETTERS. WORDING MAY NOT BE SPACED GREATER THAN 25' APART. STRIPING TO BE PAINTED ON THE FACE OF CURB WHEN PRESENT AND PAINTED FLAT ON THE PARKING SURFACE WHEN IT IS NOT.

2 FIRE LANE MARKINGS
1"= 20'-0"

Date issued/revised

15 MAR 2019 FOR PERMIT 1
2 JUL 2019 FOR CONSTRUCTION

AS BUILT
WORKMAN
5/26/2020

FIRE PREVENTION NOTES:

1. NO CONSTRUCTION OF COMBUSTIBLE MATERIALS SHALL TAKE PLACE UNTIL ALL FIRE HYDRANTS ARE INSTALLED AND OPERATIONAL.
2. THERE ARE NO OVERHEAD OBSTRUCTIONS LOWER THAN 13'-6".
3. ALL FIRE APPARATUS ACCESS ROADS SHALL BE CAPABLE OF SUPPORTING THE IMPOSED LOAD OF FIRE APPARATUS WEIGHING AT LEAST 75,000 POUNDS.

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TOWNWEST COMMONS

SHELL BUILDING & SITE WORK DEVELOPMENT

720/722 US 79 WEST
HUTTO, TX 78634

Project No.	18064
Drawn	JS
Checked	BS

1

FIRE LANE PLAN

Sheet No. FL1.0

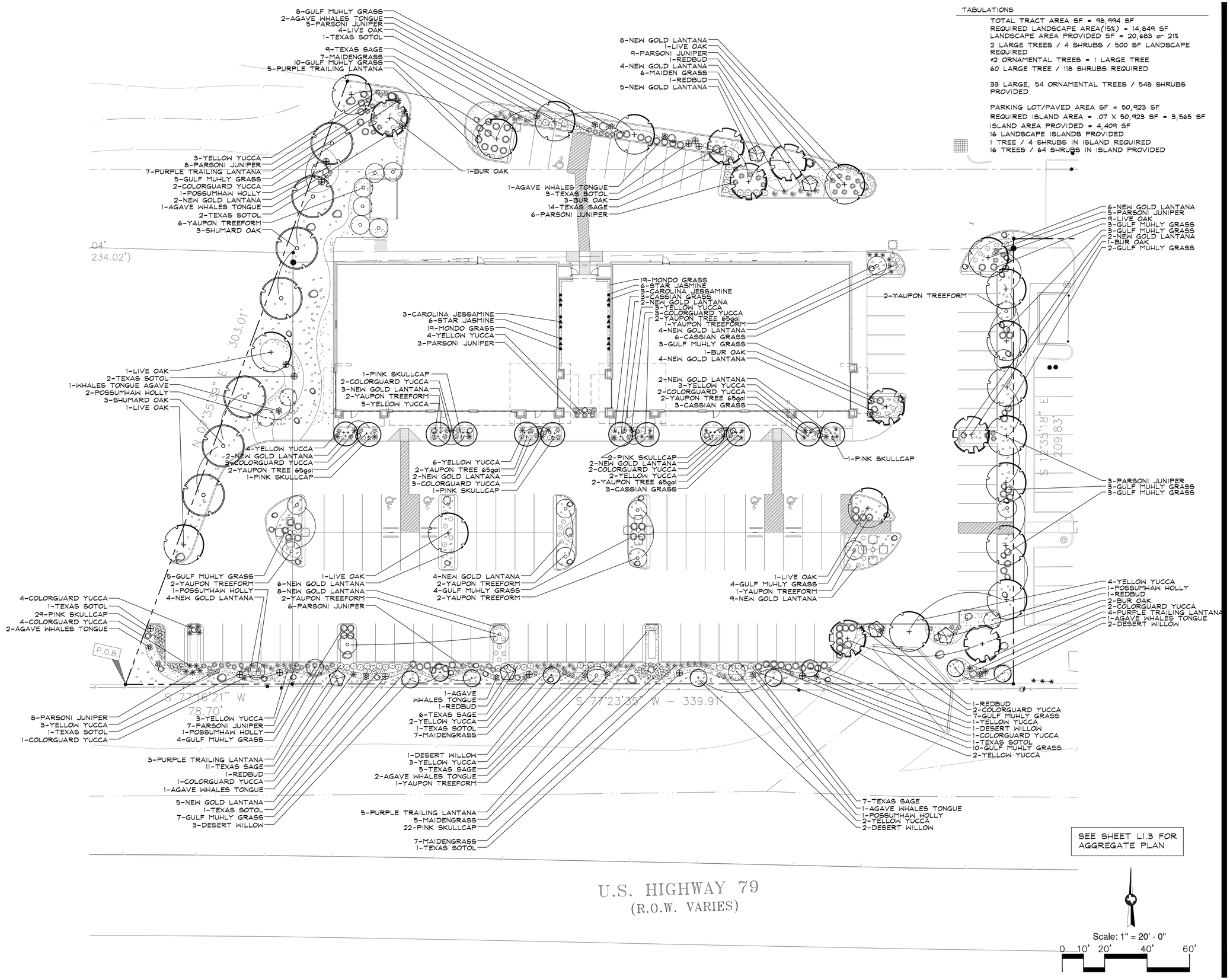
Project	Hutto Tract E
Address	720 US 79
	Hutto TX 78634

ZONE CHART

ZONE	ZONE TYPE	HEAD TYPE	LOCATION
1	Bed	Drip	North Side outer area
2	Trees	Drip	North Side outer area
3	Trees	Drip	East Side
4	Bed	Drip	East Side
5	Bed	Drip	Bed at store front leave outs
6	Bed	Drip	South side of parking area
7	Bed	Drip	Parking lot islands
8	Trees	Drip	West Side
Emergency Cut Off: RPZ Northwest Corner of property			

AS-BUILT
WORKMAN

5/26/2020



Date issued/revised

14 SEPT 2019 - PERMIT & REVIEW
14 NOV 2018 - FOR PRICING
10 DEC 2018 - SITE PLAN RESUBMITTAL
22 FEB 2019 - COMMENTS
15 MAR 2019 - FOR PERMIT
2 JUL 2019 - FOR CONSTRUCTION

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5/26/2020

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SHELL BUILDING & SITE WORK DEVELOPMENT

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PLANTING PLAN

Sheet No. L1.1

NOTES:

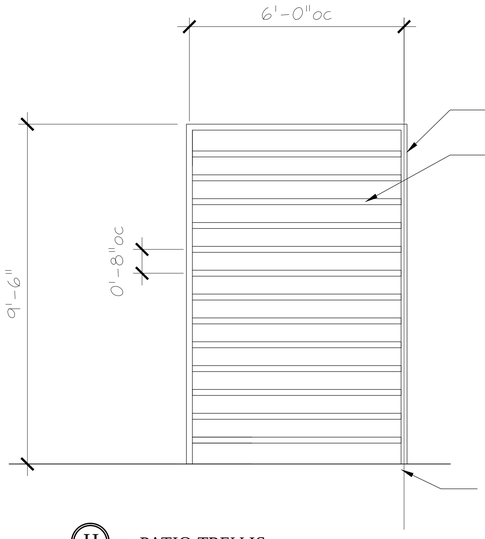
1. CONTRACTOR SHALL APPLY FOR AND PROCURE ALL REQUIRED PERMITS PRIOR TO COMMENCING WORK.

2. CONTRACTOR SHALL LOCATE ALL UNDERGROUND UTILITIES PRIOR TO COMMENCING WORK. CONTACT ALL UTILITY COMPANIES MINIMUM 48 HOURS PRIOR TO ANY WORK. CONTRACTOR SHALL BE RESPONSIBLE FOR BECOMING FAMILIAR WITH ALL UNDERGROUND UTILITIES, PIPES, STRUCTURES, ETC. CONTRACTOR SHALL TAKE SOLE RESPONSIBILITY FOR ANY COST INCURRED DUE TO DAMAGE OF THESE UTILITIES.

3. CONTRACTOR SHALL NOT WILLFULLY PROCEED WITH CONSTRUCTION AS DESIGNED WHEN IT IS OBVIOUS THAT UNKNOWN OBSTRUCTIONS AND/OR GRADE DIFFERENCES EXIST THAT MAY NOT HAVE BEEN FORESEEN IN THE DESIGN. SUCH CONDITIONS SHALL BE BROUGHT UP TO THE OWNER'S REPRESENTATIVE. THE CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR ANY NECESSARY CHANGES DUE TO FAILURE TO GIVE SUCH NOTIFICATION.

4. CONTRACTOR SHALL COORDINATE ALL WORK WITH OTHER SUBCONTRACTORS ON THE JOBSITE AS REQUIRED TO COMPLETE CONSTRUCTION.

5. CONTRACTOR TO PROVIDE SAMPLES OF EACH SHRUB AND GROUNDCOVER SPECIES OR NURSERY SOURCE FOR APPROVAL BY LANDSCAPE ARCHITECT PRIOR TO INSTALLATION. ALL PLANTS ARE TO BE SPECIMEN QUALITY, FULL POT AND HEAD, SYMMETRICAL FOLIAGE AND BRANCHING STRUCTURE. SHRUBS SHALL BE FULL TO GROUND. PLANT MATERIAL OF THE SAME SPECIES SHALL BE OBTAINED FROM THE SAME SOURCE.



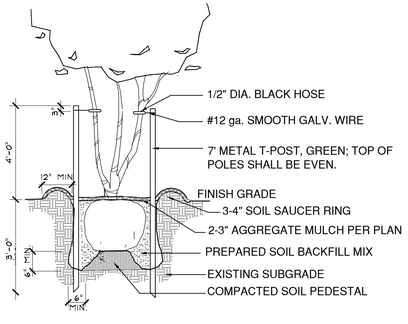
MANUFACTURER INFO:
AVADEK
9201 Winkler
Houston TX 77017
713-944-0988

ALL STRUCTURES TO BE ALUMINUM STRUCTURAL TUBING. ALL WELDS TO BE CONTINUOUS, SMOOTH AND ALL ENDS TO BE ENCLOSED.
COLOR TO BE ANODIZED/CLEAR BUT CONTRACTOR SHALL SUBMIT SAMPLE FOR APPROVAL

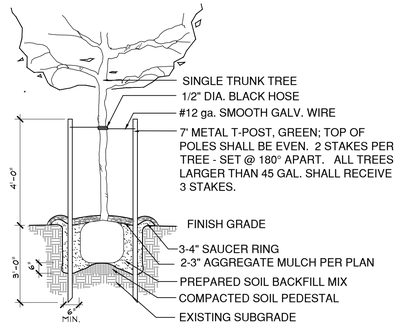
H – PATIO TRELLIS
SCALE: NTS

PLANT SCHEDULE

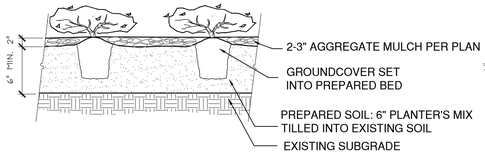
SYMBOL	COMMON NAME	SCIENTIFIC NAME	QTY	SIZE	CONDITION	REMARKS
	LIVE OAK	Quercus virginiana	18	65 GAL.	CONTAINER	12'-14' HT., 7'-8' SPRD., FULL SYMMETRICAL BRANCHING, STRAIGHT TRUNK, 3"- 3.5" CAL.
	SHUMARD OAK	Quercus shumardii	7	65 GAL.	CONTAINER	12'-14' HT., 7'-8' SPRD., FULL SYMMETRICAL BRANCHING, STRAIGHT TRUNK, 3"- 3.5" CAL.
	BUR OAK	Quercus macrocarpa	8	65 GAL.	CONTAINER	12'-14' HT., 7'-8' SPRD., FULL SYMMETRICAL BRANCHING, STRAIGHT TRUNK, 3"- 3.5" CAL.
	TEXAS REDBUD	Cercis texensis	6	45 GAL.	CONTAINER	8'-10' HT., 5'-6' SPRD., MULTI-TRUNK, 2" cal.
	POSSUMHAW HOLLY	Ilex decidua	7	30 GAL.	CONTAINER	6'-8' HT., 5'-6' SPRD., MULTI-TRUNK, (3) CANE MIN., CALIPER TOTAL MUST EXCEED 2"
	YAUPON HOLLY	Ilex vomitoria	20	30 GAL.	CONTAINER	6-7' HT., 4'-5' SPRD., MULTI-TRUNK, (3) CANE MIN., CALIPER TOTAL MUST EXCEED 2"
	YAUPON HOLLY 65gal	Ilex vomitoria	12	65 GAL.	CONTAINER	10'-12' HT., 5'-6' SPRD., MULTI-TRUNK, TREE FORM LEGGED UP A MIN 3' (3) CANE MIN., CALIPER TOTAL MUST EXCEED 2"
	DESERT WILLOW	Chilopsis linearis	9	30 GAL.	CONTAINER	8'-10' HT., 5'-6' SPRD., 2" cal.
	CASSIAN GRASS	Pennisetum alopecuroides Cassian	15	3 GAL.	CONTAINER	FULL POT, 12"-16" HT., 10"-12" SPRD., WELL ROOTED
	TEXAS SOTOL	Dasylirion texanum	16	5 GAL.	CONTAINER	FULL POT, 12"-16" HT.,15"-18" SPR., WELL ROOTED
	GULF MUHLY GRASS	Muhlenbergia capillaris	73	3 GAL.	CONTAINER	26"-30" HT., 20"-24" SPRD., FULL POT, WELL ROOTED,
	COLORGUARD YUCCA	Yucca filamentosa 'Color Guard'	36	3 GAL.	CONTAINER	12" HT., 10-12" SPRD., FULL POT, WELL ROOTED,
	PARSONS JUNIPER	Juniperus chinensis 'Parsoni'	70	3 GAL.	CONTAINER	FULL POT, 12"-14" HT.,15"-18" SPR., SPREADING
	MAIDEN GRASS	Miscanthus sinensis 'Gracillimus'	41	3 GAL.	CONTAINER	26"-30" HT., 20"-24" SPRD., FULL POT, WELL ROOTED,
	YELLOW YUCCA	Hesperaloe parviflora 'Yellow'	51	3 GAL.	CONTAINER	FULL POT, 12"-16" HT., 10"-12" SPRD., WELL ROOTED
	TEXAS SAGE	Leucophyllum frutescens 'Silverado'	50	3 GAL.	CONTAINER	26"-30" HT., 20"-24" SPRD., FULL POT, WELL ROOTED,
	WHALE'S TONGUE AGAVE	Agave ovatifolia	14	5 GAL.	CONTAINER	FULL POT, 12"-16" HT.,15"-18" SPR., WELL ROOTED
	CAROLINA JESSAMINE	Gelsemium sempervirens	6	3 GAL.	CONTAINER	STAKED
	STAR JASMINE	Trachelospermum jasminoides	12	3 GAL.	CONTAINER	STAKED
	MONDO GRASS	Ophiopogon japonica	38	1 GAL.	CONTAINER	12" HT., 10-12" SPRD., FULL POT, WELL ROOTED,
	NEW GOLD LANTANA	Lantana camara 'New Gold'	71	1 GAL.	CONTAINER	12" HT., 10-12" SPRD., FULL POT, WELL ROOTED,
	PURPLE TRAILING LANTANA	Lantana montevidensis 'Purple'	28	1 GAL.	CONTAINER	12" HT., 10-12" SPRD., FULL POT, WELL ROOTED,
	PINK SKULLCAP	Scutellaria suffrutescens	27	1 GAL.	CONTAINER	FULL POT, 6" HT., 8" SPRD., WELL ROOTED



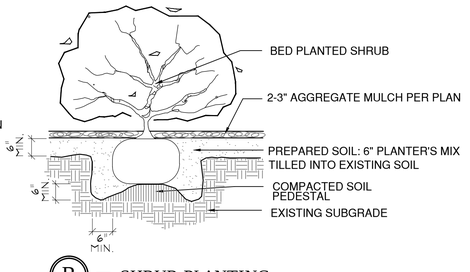
C – MULTI-STEM TREE PLANTING
SCALE: NTS 45GAL OR LARGER ONLY



A – TREE PLANTING
SCALE: NTS



D – GROUNDCOVER PLANTING
SCALE: NTS



B – SHRUB PLANTING
SCALE: NTS

Date issued/revised

14 SEPT 2019 - PERMIT & REVIEW
14 NOV 2018 - FOR PRICING
10 DEC 2018 - SITE PLAN RESUBMITTAL
22 FEB 2019 - COMMENTS
15 MAR 2019 - FOR PERMIT
2 JUL 2019 - FOR CONSTRUCTION

AS BUILT
WORKMAN
5/26/2020

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LANDSCAPE ARCHITECTURE

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Project No. 18064
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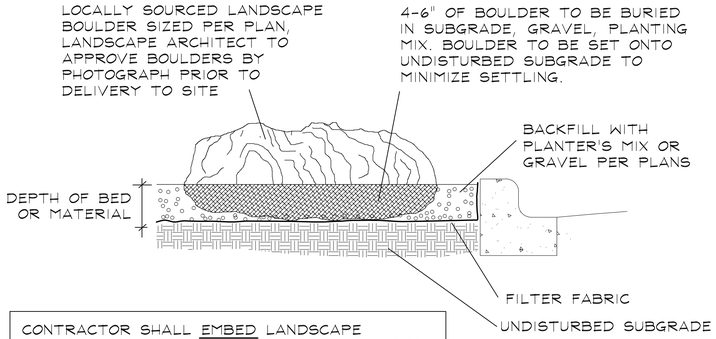
Checked

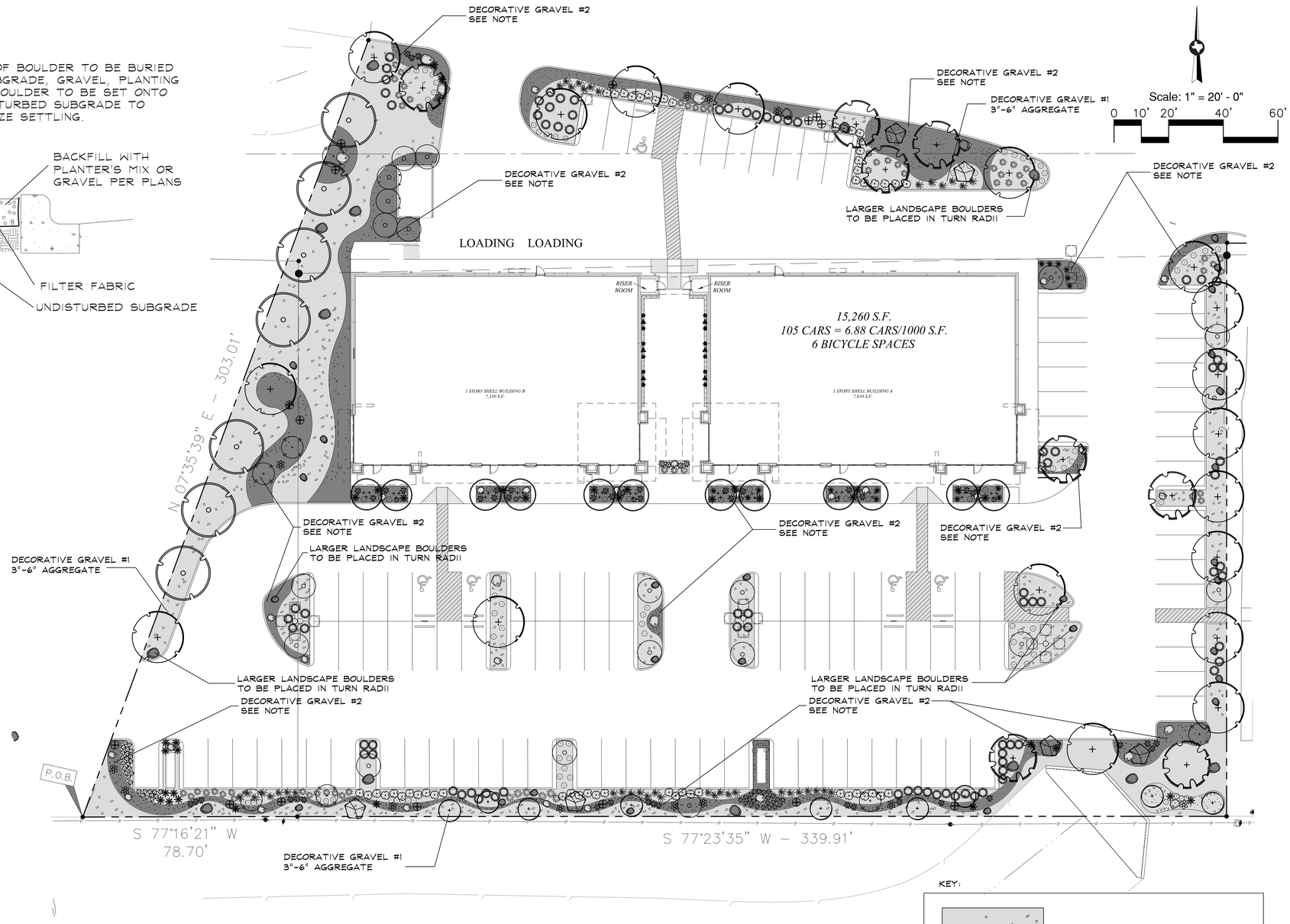
LANDSCAPE DETAILS

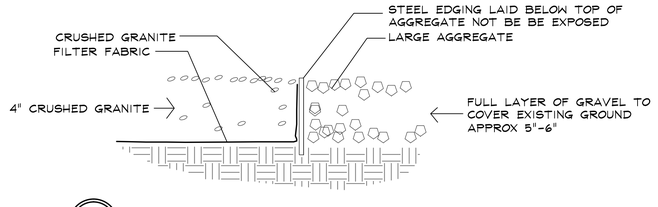
Sheet No. L1.2



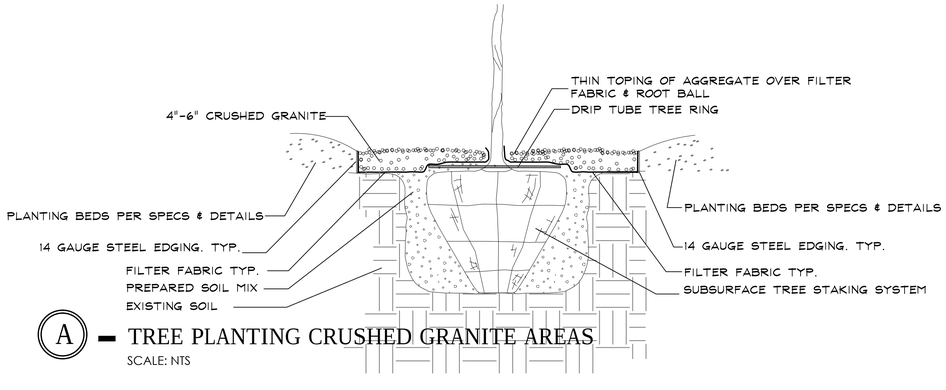
CONTRACTOR SHALL EMBED LANDSCAPE BOULDER INTO BED OR ROCK AREAS. BOULDERS SHALL BE LAID IN PLACE BEFORE BACKFILL OF AGGREGATE OR BED MATERIAL

Ⓒ – LANDSCAPE ROCK
SCALE: NTS





Ⓑ – GRANITE BORDER
SCALE: NTS



Ⓐ – TREE PLANTING CRUSHED GRANITE AREAS
SCALE: NTS

KEY:

DECORATIVE GRAVEL #1
LARGE AGGREGATE
3"-6" RIVER WASH GRAVEL(BULLROCK)

DECORATIVE GRAVEL #2
SMALLER AGGREGATE
CRUSHED GRANITE

LANDSCAPE BOULDERS
MOSS BOULDERS
15-LARGE BOULDERS 1 TON
2-PALLETS OF MEDIUM SIZE (20-25) PER PALLET

CONTRACTOR SHALL SUBMIT SAMPLES FOR FINAL APPROVAL

Date issued/revised

14 SEPT 2019 - PERMIT & REVIEW
14 NOV 2018 - FOR PRICING
10 DEC 2018 - SITE PLAN RESUBMITTAL
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AS BUILT WORKMAN
5/26/2020

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ROCKSCAPE PLAN

Sheet No. L1.3

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5/26/2020

Irrigation

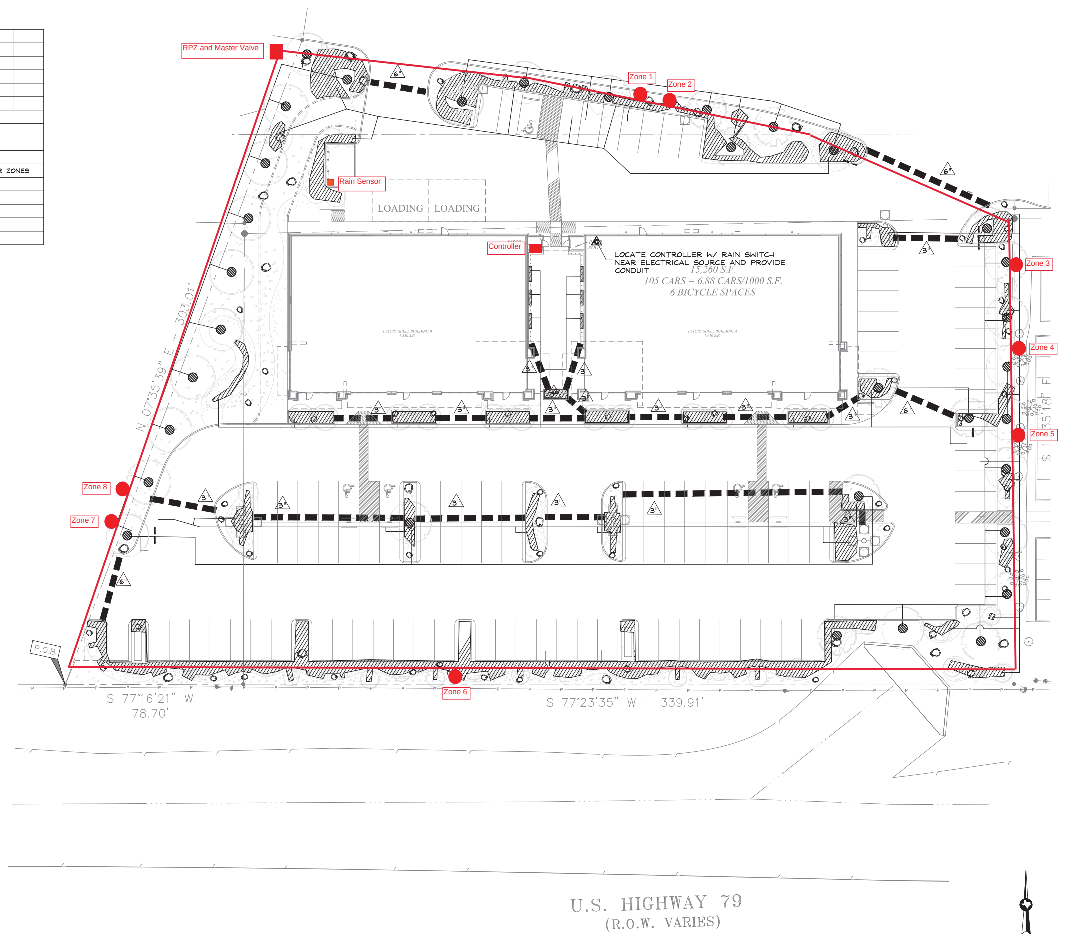
Symbol	Item	Type			
⬟	HUNTER AFB	BUBBLER			
	HUNTER MP1000	MP ROTATOR			
	HUNTER MP2000	MP ROTATOR			
	HUNTER MP3000	MP ROTATOR			
	HUNTER MPEST	MP ROTATOR			
	HUNTER MPSST	MP ROTATOR			
	Febco 860				
	Rain Bird PEB				
	Rain Bird XCZ-PRB-1XX-COM				
	Hunter I-Core				
	Nibco isolation valve W/ mini clik SIZE PER ZONES				
	1.5 inch meter				
	Drip Zone				
	Lateral Line				
	1.5" Mainline - SCH 40				
	PVC SLEEVE - Size noted on plan 6"				

PIPE SIZING CHART:

CLASS 200 PVC LATERAL LINES
(1/2" IS SCH. 40)

SIZE	GALLONS
1/2"	0 - 6
3/4"	6.1 - 10
1"	10.1 - 17
1 1/4"	17.1 - 26
1 1/2"	26.1 - 36
2"	36.1 - 55

LARGE TREES SHALL HAVE OWN TREE RINGS



Scale: 1" = 20' - 0"

0 10' 20' 40' 60'

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REGISTERED LANDSCAPE ARCHITECT
CHARLES M. BRIDGES
2247
STATE OF TEXAS

7-2-19

SHELL BUILDING & SITE WORK DEVELOPMENT

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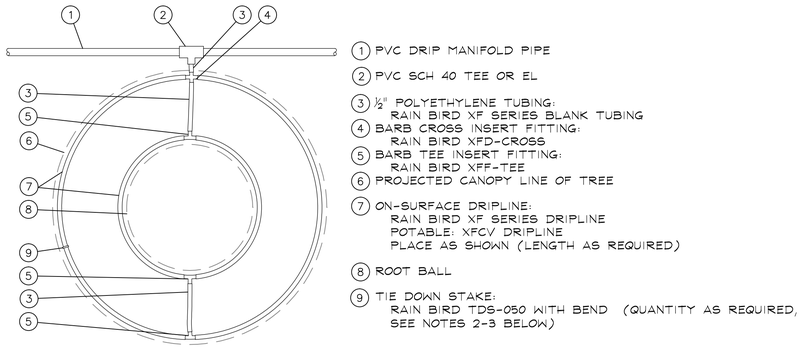
IRRIGATION PLAN

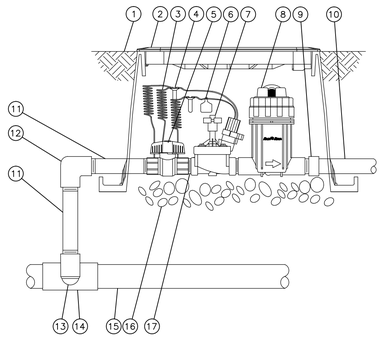
Sheet No. L2.1



1. PVC DRIP MANIFOLD PIPE
2. PVC SCH 40 TEE OR EL
3. ½" POLYETHYLENE TUBING: RAIN BIRD XF SERIES BLANK TUBING
4. BARB CROSS INSERT FITTING: RAIN BIRD XFD-CROSS
5. BARB TEE INSERT FITTING: RAIN BIRD XFF-TEE
6. PROJECTED CANOPY LINE OF TREE
7. ON-SURFACE DRIPLINE: RAIN BIRD XF SERIES DRIPLINE POTABLE: XFCV DRIPLINE PLACE AS SHOWN (LENGTH AS REQUIRED)
8. ROOT BALL
9. TIE DOWN STAKE: RAIN BIRD TDS-050 WITH BEND (QUANTITY AS REQUIRED, SEE NOTES 2-3 BELOW)

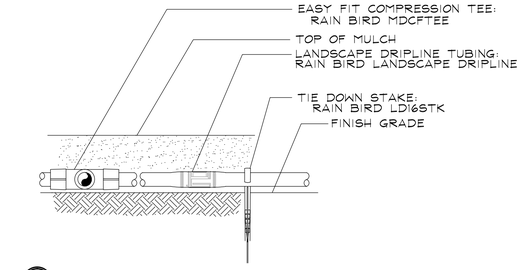
NOTES:
1. DISTANCE BETWEEN LATERAL RINGS AND EMITTER SPACING TO BE BASED ON SOIL TYPE, AND TREE CANOPY. SEE INSTALLATION SPECIFICATIONS ON RAIN BIRD WEB SITE (WWW.RAINBIRD.COM) FOR SUGGESTED SPACING.
2. PLACE TIE DOWN STAKES EVERY THREE FEET IN SAND, FOUR FEET IN LOAM, AND FIVE FEET IN CLAY.
3. AT FITTINGS WHERE THERE IS A CHANGE OF DIRECTION SUCH AS TEES OR ELBOWS, USE TIE-DOWN STAKES ON EACH LEG OF THE CHANGE OF DIRECTION.

I – TREE RING LAYOUT, TYP.
NTS

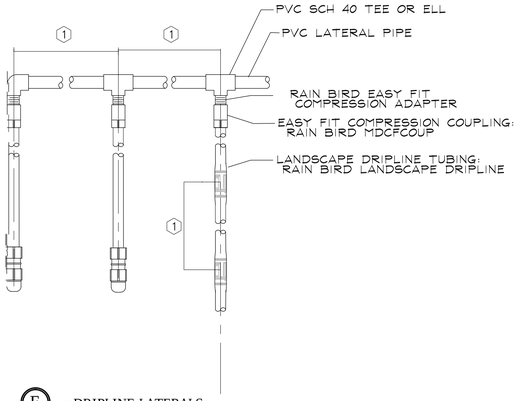


1. FINISH GRADE/TOP OF MULCH
2. VALVE BOX WITH COVER: RAIN BIRD VB-STD
3. 30-INCH LINEAR LENGTH OF WIRE, COILED
4. WATERPROOF CONNECTION: RAIN BIRD DB SERIES
5. 1-INCH BALL VALVE (INCLUDED IN XCZ-PRB-100-COM KIT)
6. ID TAG
7. REMOTE CONTROL VALVE: RAIN BIRD PESB (INCLUDED IN XCZ-PRB-100-COM KIT)
8. PRESSURE REGULATING QUICK CHECK BASKET FILTER: RAIN BIRD PRB-QKCHK-100 (INCLUDED IN XCZ-PRB-100-COM KIT)
9. PVC SCH 40 FEMALE ADAPTOR
10. LATERAL PIPE
11. PVC SCH 80 NIPPLE (LENGTH AS REQUIRED)
12. PVC SCH 40 ELL
13. PVC SCH 80 NIPPLE (2-INCH LENGTH, HIDDEN) AND PVC SCH 40 ELL
14. PVC SCH 40 TEE OR ELL
15. MAINLINE PIPE
16. 3-INCH MINIMUM DEPTH OF 3/4-INCH WASHED GRAVEL
17. PVC SCH 80 NIPPLE, CLOSE (INCLUDED IN XCZ-PRB-100-COM KIT)

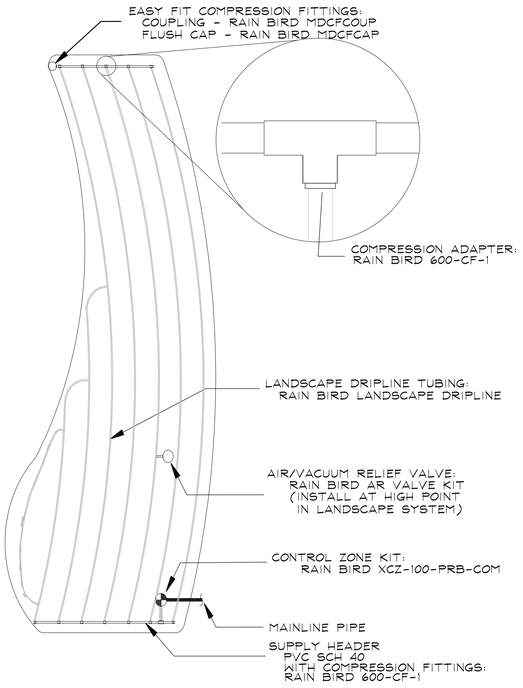
H – XCZ-PRB-100-COM 1" COMMERCIAL
NTS



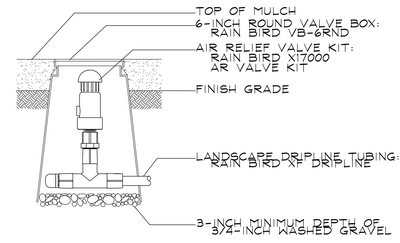
G – LANDSCAPE DRIPLINE ON GRADE
NTS



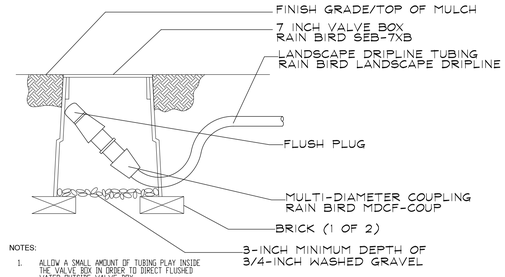
F – DRIPLINE LATERALS
NTS



E – DRIPLINE LAYOUT, TYP.
NTS

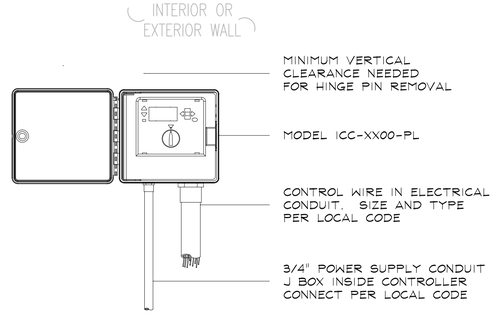


D – AIR RELIEF VALVE KIT
NTS

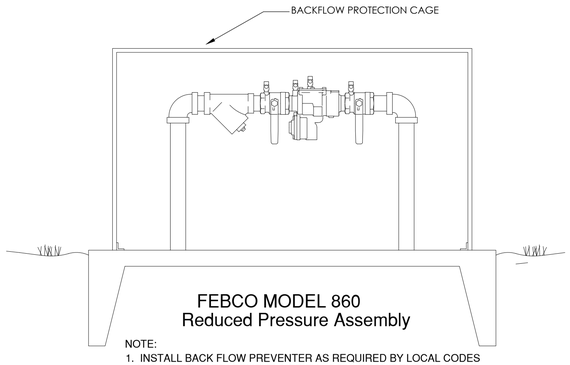


NOTES:
1. ALLOW A SMALL AMOUNT OF TUBING PLAY INSIDE THE VALVE BOX IN ORDER TO DIRECT FLUSHED WATER OUTSIDE VALVE BOX

C – FLUSH POINT



B – IRRIGATION CONTROLLER HUNTER ICC-PL



NOTE:
1. INSTALL BACK FLOW PREVENTER AS REQUIRED BY LOCAL CODES AND HEALTH DEPARTMENT. VERIFY LOCAL REQUIREMENTS PRIOR TO INSTALLATION.

A – FEBCO #860
NTS

Date issued/revised

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WORKMAN
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SHELL BUILDING & SITE WORK DEVELOPMENT

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Project No. 18064
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IRRIGATION DETAILS

Sheet No. L2.2

NOTES:

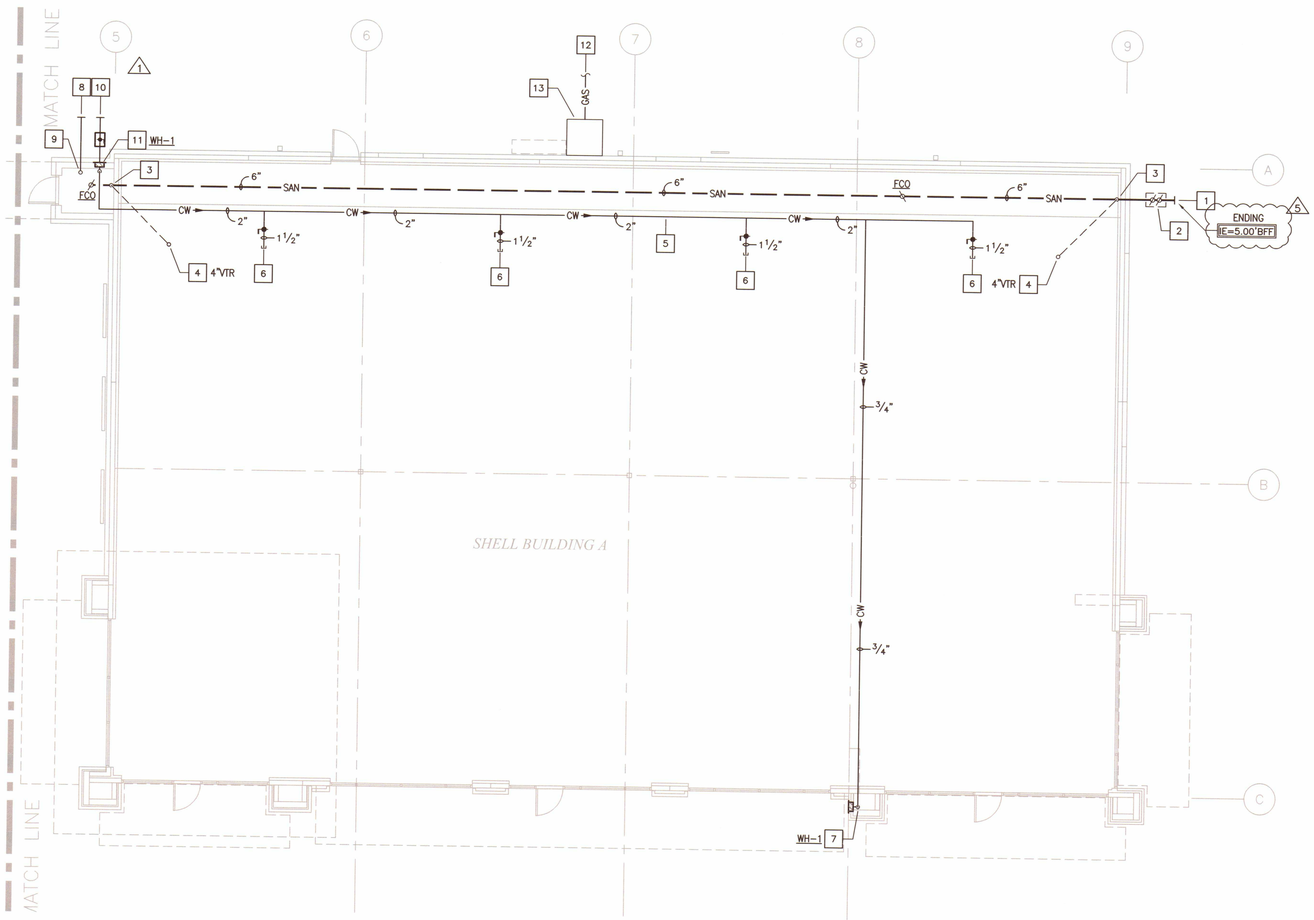
1. SITE INSPECTION: CONTRACTOR SHALL VISIT THE SITE OF WORK PRIOR TO SUBMISSION OF THEIR BID AND THOROUGHLY FAMILIARIZE THEMSELVES WITH THE WORKING CONDITIONS AND EXACT NATURE OF THE WORK. SUBMISSION OF A BID ACKNOWLEDGES FULL RESPONSIBILITY FOR FURNISHING A COMPLETE AND FUNCTIONAL SYSTEM. NO CHANGES IN CONTRACT WILL BE MADE TO ACCOMMODATE OR ALLOW EXTRA FUNDS FOR ANY OMISSION WHICH RESULTS FROM A FAILURE TO THOROUGHLY MAKE THE EXAMINATION.
2. GENERAL CONTRACTOR IS RESPONSIBLE FOR CONNECTION OF UTILITIES, ESTABLISHING ACCOUNTS, THEN TRANSFERRING THE UTILITIES TO THE LANDLORDS NAME UPON RECEIPT OF CERTIFICATE OF OCCUPANCY.

FIRE PROTECTION NOTE:

LICENSED SPRINKLER ENGINEER OR LICENSED SPRINKLER CONTRACTOR, TO PROVIDE DRAWINGS AND CALCULATIONS FOR AN AUTOMATIC FIRE SPRINKLER SYSTEM FOR THIS BUILDING, TO COMPLY WITH SPACE LAYOUT, NFPA 13, STATE, LOCAL, AND INSURANCE UNDERWRITING AUTHORITIES. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION.

PLUMBING KEYED NOTES

1. 6" SANITARY SEWER, CONTRACTOR TO MAKE CONNECTION AS NECESSARY TO SITE SANITARY SEWER PIPING. REFER TO CIVIL DRAWINGS FOR EXACT LOCATION.
2. TWO-WAY EXTERIOR CLEANOUT. COORDINATE EXACT LOCATION WITH OWNER. REFER TO PLUMBING DETAIL SHEET.
3. VENT UP FROM BELOW SLAB. COORDINATE EXACT LOCATION WITH OWNER.
4. ROUTE VENT PIPING WITHIN JOIST SPACE. VENT THROUGH ROOF.
5. ROUTE DOMESTIC COLD WATER IN JOIST SPACE. REFER TO PLUMBING DETAIL SHEET FOR TYPICAL PIPE HANGER DETAIL.
6. VALVE AND CAP COLD WATER LINE AT JOIST LEVEL FOR FUTURE CONNECTION. COORDINATE EXACT LOCATION WITH OWNER PRIOR TO INSTALLATION.
7. DROP 3/4" COLD WATER TO SERVE WALL HYDRANT. MOUNT AT 12" ABOVE FINISHED FLOOR OR OTHERWISE SPECIFIED BY ARCHITECT.
8. 6" FIRE WATER SERVICE, THIS CONTRACTOR TO MAKE CONNECTION AS NECESSARY TO SITE FIRE SERVICE PIPING. REFER CIVIL DRAWINGS FOR CONTINUATION.
9. 6" FIRE WATER ENTRY, REFER TO PLUMBING DETAIL SHEET.
10. 2" DOMESTIC COLD WATER AT 50 PSI MINIMUM, CONTRACTOR TO MAKE CONNECTION AS NECESSARY TO SITE DOMESTIC WATER PIPING. REFER TO CIVIL DRAWINGS FOR CONTINUATION.
11. 2" DOMESTIC WATER ENTRY, REFER TO PLUMBING DETAIL SHEET.
12. PROVIDE 6" PVC SLEEVE FOR FUTURE NATURAL GAS PIPING BELOW GRADE. PROVIDE 4' X 4' LEAVE-OUT AT ALL 90° TURNS AND AT 100' INTERVALS. CONTRACTOR TO FILL IN LEAVE-OUTS AFTER GAS PIPING HAS BEEN INSTALLED. COORDINATE EXACT DEMARCATION POINT WITH GAS COMPANY.
13. 4'X4' LEAVE-OUT IN CONCRETE FOR FUTURE NATURAL GAS PIPING/ METER. COORDINATE EXACT LOCATION WITH OWNER PRIOR TO INSTALLATION.



1 **PLUMBING FLOOR PLAN - BLDG 'A'**
SCALE: 1/8" = 1'-0"

AS BUILTS
5-22-2020

Date issued/revised

14 SEP 2018 FOR PERMIT & REVIEW
NOVEMBER 12, 2018 REVISIONS 1
NOVEMBER 14, 2018 FOR PRICING
15 MAR 2019 FOR PERMIT
02 JUL 2019 FOR CONSTRUCTION
23 OCT 2019 SANITARY REVISION 5

AS BUILT
WORKMAN
5/26/2020

SALAS O'BRIEN
[expect a difference]
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Project No. 004-181016

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PLUMBING FLOOR PLAN

Sheet No. P1.0

NOTES:

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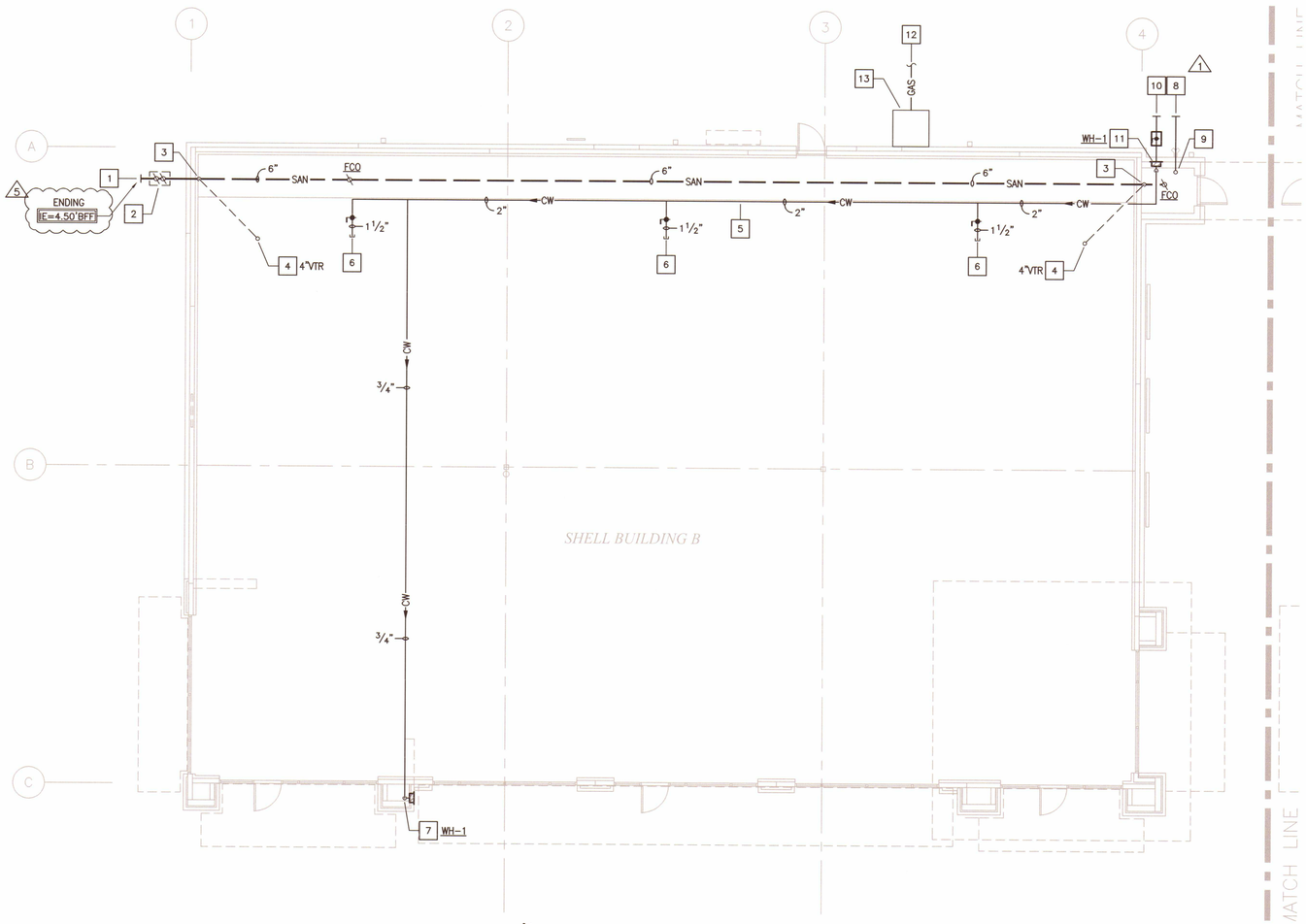
PLUMBING KEYED NOTES

1. 6" SANITARY SEWER, CONTRACTOR TO MAKE CONNECTION AS NECESSARY TO SITE SANITARY SEWER PIPING. REFER TO CIVIL DRAWINGS FOR EXACT LOCATION.
2. TWO-WAY EXTERIOR CLEANOUT. COORDINATE EXACT LOCATION WITH OWNER. REFER TO PLUMBING DETAIL SHEET.
3. VENT UP FROM BELOW SLAB. COORDINATE EXACT LOCATION WITH OWNER.
4. ROUTE VENT PIPING WITHIN JOIST SPACE. VENT THROUGH ROOF.
5. ROUTE DOMESTIC COLD WATER IN JOIST SPACE. REFER TO PLUMBING DETAIL SHEET FOR TYPICAL PIPE HANGER DETAIL.
6. VALVE AND CAP COLD WATER LINE AT JOIST LEVEL FOR FUTURE CONNECTION. COORDINATE EXACT LOCATION WITH OWNER PRIOR TO INSTALLATION.
7. DROP $^{3}/_{4}$" COLD WATER TO SERVE WALL HYDRANT. MOUNT AT 12" ABOVE FINISHED FLOOR OR OTHERWISE SPECIFIED BY ARCHITECT.
8. 6" FIRE WATER SERVICE, THIS CONTRACTOR TO MAKE CONNECTION AS NECESSARY TO SITE FIRE SERVICE PIPING. REFER CIVIL DRAWINGS FOR CONTINUATION.
9. 6" FIRE WATER ENTRY, REFER TO PLUMBING DETAIL SHEET.
10. 2" DOMESTIC COLD WATER AT 50 PSI MINIMUM. CONTRACTOR TO MAKE CONNECTION AS NECESSARY TO SITE DOMESTIC WATER PIPING. REFER TO CIVIL DRAWINGS FOR CONTINUATION.
11. 2" DOMESTIC WATER ENTRY, REFER TO PLUMBING DETAIL SHEET.
12. PROVIDE 6" PVC SLEEVE FOR FUTURE NATURAL GAS PIPING BELOW GRADE. PROVIDE 4' X 4' LEAVE-OUT AT ALL 90° TURNS AND AT 100' INTERVALS. CONTRACTOR TO FILL IN LEAVE-OUTS AFTER GAS PIPING HAS BEEN INSTALLED. COORDINATE EXACT DEMARCATION POINT WITH GAS COMPANY.
13. 4'X4' LEAVE-OUT IN CONCRETE FOR FUTURE NATURAL GAS PIPING/ METER. COORDINATE EXACT LOCATION WITH OWNER PRIOR TO INSTALLATION.



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1 **PLUMBING FLOOR PLAN - BLDG 'B'**
SCALE: 1/8" = 1'-0"

AS BUILTS
5-22-2020

Date issued/revised

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PLUMBING FLOOR PLAN

Sheet No. P1.1

PLUMBING LEGEND

SYMBOL	DESCRIPTION
SAN	SANITARY OR WASTE PIPING ABOVE GRADE (SAN)
SAN	SANITARY OR WASTE PIPING BELOW GRADE (SAN)
GW	GREASE WASTE PIPING ABOVE GRADE (GW)
GW	GREASE WASTE PIPING BELOW GRADE (GW)
	VENT PIPING ABOVE OR BELOW GRADE (V)
CW	COLD WATER PIPING (CW)
HW	HOT WATER PIPING (HW)
F	FIRE PROTECTION PIPING (F)
FS	FIRE SPRINKLING PIPING (FS)
GAS	NATURAL GAS PIPING (G)
	FLOW DIRECTIONAL ARROW
	SHUT–OFF VALVE
	BALL VALVE (BV)
	HORIZONTAL SWING CHECK
	UNION
	Y–STRAINER
	PIPING DOWN
	RISE OR DROP PIPING
	PIPING UP –OR– PIPING UP & DOWN
	CAP ON END OF PIPE
	CLEANOUT (WALL OR CEILING) (CO)
	FLOOR CLEANOUT (FCO)
	EXTERIOR CLEANOUT WITH 18"x18"x4" CONCRETE PAD (ECO)
	TWO–WAY CLEANOUT (PROVIDE 18"x24"x4" CONCRETE PAD OUTSIDE)
	HOSE BIBB
	WALL HYDRANT
1	REFER TO KEYED NOTE
	FLOOR DRAIN (FD)
	FLOOR DRAIN WITH P–TRAP (FD)
	FLOOR DRAIN WITH P–TRAP AT 45° ANGLE (FD)
(E)	EXISTING
(N)	NEW
VTR	VENT THRU ROOF
FD	FLOOR DRAIN
FS	FLOOR SINK
	CONNECT NEW TO EXISTING
IE=100.00'	INVERT ELEVATION
1	DELTA CHANGE SYMBOL

NOTE: NOT ALL SYMBOLS MAY APPLY TO THIS PROJECT.

PLUMBING GENERAL NOTES

1. PRIOR TO BEGINNING CONSTRUCTION, COORDINATE BUILDING BACKFLOW PREVENTION REQUIREMENTS WITH THE LOCAL AUTHORITY HAVING JURISDICTION AND PROVIDE AS DIRECTED.
2. THE DRAWINGS AND SPECIFICATIONS ARE INTENDED TO SUPPLEMENT EACH OTHER AND ANY MATERIAL OR LABOR CALLED FOR IN ONE SHALL BE FURNISHED AND INSTALLED EVEN THOUGH NOT SPECIFICALLY MENTIONED IN BOTH. ANY MATERIAL OR LABOR WHICH IS NEITHER SHOWN ON THE DRAWINGS NOR CALLED FOR IN THE SPECIFICATIONS, BUT WHICH IS OBVIOUSLY NECESSARY TO COMPLETE THE WORK, AND WHICH IS USUALLY INCLUDED IN WORK OF SIMILAR CHARACTER, SHALL BE FURNISHED AND INSTALLED AS PART OF CONTRACT.
3. THE CONTRACTOR SHALL COORDINATE ALL WORK CLOSELY WITH MECHANICAL AND ELECTRICAL EQUIPMENT, DUCTWORK, CONDUIT AND STRUCTURAL ITEMS. SHOULD A CONFLICT OCCUR CONTRACTOR MUST NOTIFY THE ARCHITECT/ ENGINEER PRIOR TO INSTALLING AN ALTERNATE PIPING PLAN.
4. ALL WORK, METHODS AND INSTALLATIONS INVOLVED IN THE PLUMBING DESIGN SHALL BE IN ACCORDANCE WITH THE CITY BUILDING CODES, INSPECTION REGULATIONS AND ALL OTHER OFFICIALS HAVING JURISDICTION.
5. COORDINATE ROUTING OF ALL BELOW GRADE PIPING WITH GRADE BEAMS. ADJUST INVERT ELEVATIONS OR PIPE ROUTING TO CLEAR GRADE BEAMS.
6. DO NOT ROUGH–IN FROM THESE DRAWINGS. REFER TO LATEST ARCHITECTURAL DRAWINGS FOR DIMENSIONED LOCATIONS.
7. COORDINATE ALL FIXTURE AND EQUIPMENT LOCATIONS AND CONNECTION REQUIREMENTS WITH LATEST ARCHITECTURAL DRAWINGS AND SPECIFICATIONS PRIOR TO ANY ROUGH–INS.
8. PROTECT EQUIPMENT AND WORK FROM DAMAGE DURING HANDLING AND INSTALLATION UNTIL COMPLETION OF CONSTRUCTION.
9. REMOVE ALL EXCESS MATERIAL AND DEBRIS AND CLEAN ALL EQUIPMENT UPON COMPLETION OF WORK. TOUCH UP WITH PAINT WHERE REQUIRED.
10. ALL CONNECTIONS BETWEEN PIPES OF DISSIMILAR MATERIALS SHALL BE MADE WITH DI–ELECTRIC UNIONS. PROVIDE ACCESS PANELS WHERE REQUIRED.
11. EACH VENT SHALL TERMINATE VERTICALLY NOT LESS THAN 6" ABOVE ROOF, MAINTAIN MINIMUM 15'–0" DISTANCE BETWEEN VENT TERMINALS THROUGH ROOF AND ALL FRESH AIR INTAKES, AND A MINIMUM 5'–0" FROM ANY EXTERIOR WALL.
12. THE CONTRACTOR SHALL VISIT THE SITE PRIOR TO SUBMITTAL OF BID TO DETERMINE CONDITIONS AFFECTING THE WORK. ANY ITEMS WHICH ARE NOT COVERED IN THE BID DOCUMENTS OR ANY PROPOSED SUBSTITUTIONS SHALL BE LISTED SEPARATELY AND QUALIFIED IN THE CONTRACTORS BID. SUBMITTAL OF BID SHALL SERVE AS EVIDENCE OF KNOWLEDGE OF EXISTING CONDITIONS AND ANY MODIFICATIONS WHICH ARE REQUIRED TO MEET THE INTENT OF THE DRAWINGS AND SPECIFICATIONS. FAILURE TO VISIT THE SITE DOES NOT RELIEVE THE CONTRACTOR OF RESPONSIBILITY IN PERFORMANCE OF WORK.
13. CONTRACTOR TO PROVIDE (1) YEAR WARRANTY ON ALL ITEMS PROVIDED.

FIRE SPRINKLER SYSTEM

1. DESIGN AND PROVIDE LABOR AND MATERIALS FOR THE COMPLETE INSTALLATION OF AN AUTOMATIC WET PIPE FIRE EXTINGUISHING SPRINKLER SYSTEM WITH THE ATTENDANT ACCESSORIES FOR THE ENTIRE AREA.
2. STUDY THE GENERAL, STRUCTURAL, ELECTRICAL AND MECHANICAL DRAWINGS AND SPECIFICATIONS AND FIELD SURVEY THE EXISTING BUILDING IN ORDER TO BECOME FAMILIAR WITH THE BUILDING AND DETAILS AS THEY APPLY TO THE WORK OF THIS SECTION. COOPERATE WITH OTHERS SO THAT THERE WILL BE NO CONFLICT OF SPACE REQUIRED. DUCTWORK AND ELECTRICAL WORK SHALL TAKE PRECEDENCE OVER OTHER WORK, EXCEPT WHERE IT IS ABSOLUTELY NECESSARY TO MAINTAIN COVERAGE PROTECTION.
3. THE INSTALLATION OF THE ENTIRE SPRINKLER SYSTEM SHALL COMPLY WITH ALL RULES AND REGULATIONS OF THE NATIONAL BOARD OF FIRE UNDERWRITERS, THE GOVERNING BUILDING CODE, REQUIREMENTS OF NFPA PAMPHLET 13, AND OTHER LOCAL AUTHORITIES EXERCISING JURISDICTION.
4. IT SHALL BE THE FIRE PROTECTION CONTRACTOR'S RESPONSIBILITY, PRIOR TO BID, TO VERIFY PRESSURE AT THE PROJECT SITE BY PERFORMING A FLOW TEST. DETERMINE IF THE AVAILABLE STATIC AND RESIDUAL PRESSURE WILL ADEQUATELY PROVIDE THE FIRE EXTINGUISHING SYSTEM WITH THE NECESSARY PRESSURE OR IF A FIRE PUMP, BREAK TANK AND NECESSARY APPURTENANCES ARE REQUIRED.
5. PROVIDE SCHEDULE 10 AND SCHEDULE 40 BLACK STEEL PIPE AND FITTINGS IN ACCORDANCE WITH THE REQUIREMENTS OF NFPA FOR APPLICABLE FIRE PROTECTION SYSTEMS. CONFORM TO ASTM NFPA 13 2002 EDITION TABLE 6.3.1.1. PROVIDE PIPING WITH MALLEABLE IRON, CAST IRON, STEEL WELDED OR SCREWED FITTINGS. VICTAULIC GROOVED FITTINGS MAY BE USED ABOVE GRADE IN ACCESSIBLE LOCATIONS ONLY.
6. ALL HEADS SHALL BE UL LISTED AND FM APPROVED, AND COMPLY WITH THE LATEST REQUIREMENTS OF NFPA 13 WITH RESPECT TO ORIFICE SIZE. SPRINKLER HEADS WITH "O" RING DESIGN SHALL NOT BE ACCEPTABLE. TYCO MODEL B, FRB, OR APPROVED EQUAL UNLESS STATED OTHERWISE.

PLUMBING SCOPE & SPECIFICATION

THE WORK OF THIS SECTION SHALL INCLUDE, BUT NOT BE LIMITED TO:

A. A DOMESTIC COLD WATER DISTRIBUTION SYSTEM TO SERVE ALL FIXTURES.
B. A SANITARY SOIL WASTE AND VENT SYSTEM TO SERVE ALL FIXTURES.

DRAWINGS ARE DIAGRAMMATIC; CONFIRM DIMENSIONS AND LOCATIONS IN THE FIELD, ADVISE OF MAJOR DISCREPANCIES.

GUARANTEE LABOR AND MATERIALS FOR ONE YEAR.

ADHERE TO APPLICABLE LOCAL CODES AND REGULATIONS, INCLUDING BUT NOT LIMITED TO THE CITY CODES.

PRODUCE RECORD DRAWINGS.

CONTRACTOR SHALL OBTAIN REQUIRED PERMITS AND PAY ALL FEES.

VALVES

VALVES SHALL BE MANUFACTURED BY NIBCO, HAMMOND, POWELL, STOCKHAM, WATTS OR EQUIVALENT APPROVED BY THE ENGINEER.

BALL VALVES SHALL HAVE CAST BRONZE BODY, BLOWOUT PROOF STEMS, FULL SIZE PORT, 316 STAINLESS STEEL TRIM, TEFLON SEAT AND SEAL AND THRUST WASHERS. VALVES 2" AND SMALLER SHALL BE NIBCO T–585–70–66 OR APPROVED EQUIVALENT.

WHERE VALVES ARE INSTALLED IN INSULATED PIPING, PROVIDE WITH EXTENDED NECK SO VALVE OPERATOR AND STOP PLATE CLEARS THE FULL THICKNESS INSULATION SO THE LEVER OR HANDLE WILL NOT DAMAGE THE INSULATION.

INSTALL VALVES WITH STEMS UPRIGHT OR HORIZONTAL, NOT INVERTED.

INSTALL VALVES FOR SHUT–OFF AND ISOLATING SERVICE AT EACH PIECE OF EQUIPMENT, AT VERTICAL RISERS, AND WHERE SHOWN ON THE DRAWINGS.

PROVIDE ACCESS WHERE VALVES ARE NOT EXPOSED.

UNIONS

UNIONS IN COPPER OR BRASS LINES SHALL BE BRASS, THREADED PATTERN UNIONS.

EXCAVATION

EXCAVATE TRENCHES FOR UNDERGROUND PIPING TO THE REQUIRED DEPTH.

CUT THE BOTTOM OF THE TRENCH OR EXCAVATION TO UNIFORM GRADE.

SHOULD ROCK BE ENCOUNTERED, EXCAVATE 6" BELOW GRADE, FILL WITH BEDDING MATERIAL (SAND) AND TAMP WELL.

LAY OUT ALIGNMENT OF PIPE TRENCHES TO AVOID OBSTRUCTIONS. PROVIDE ASSURANCE THAT PROPOSED ROUTE OF PIPE WILL NOT INTERFERE WITH BUILDING FOUNDATION BEFORE ANY CUTTING IS BEGUN. SHOULD INTERFERENCE BE FOUND, CONTACT THE ARCHITECT/ENGINEER BEFORE PROCEEDING.

BACKFILL

BACKFILL SHALL NOT BE PLACED UNTIL THE WORK HAS BEEN INSPECTED, TESTED AND APPROVED. USE SUITABLE FRIABLE SOILS AS BACKFILL MATERIAL. DO NOT USE PEAT, SILT, MUCK, DEBRIS OR OTHER ORGANIC MATERIALS. DEPOSIT BACKFILL IN UNIFORM LAYERS.

PLACE BACKFILL MATERIAL IN UNIFORM LAYERS, 8" MAXIMUM LOOSE MEASURE. COMPACT TO NOT LESS THAN 95% OF MAXIMUM SOIL DENSITY AS DETERMINED BY ASTM D698 STANDARD PROCTOR.

PLUMBING PIPING HANGERS

SUPPORT PIPING TO MAINTAIN LINE AND GRADE, WITH PROVISION FOR EXPANSION AND CONTRACTION. USE APPROVED CLEVIS–TYPE OR TRAPEZE–TYPE HANGERS CONNECTED TO STRUCTURAL MEMBERS OF THE BUILDING. SINGLE PIPE RUNS TO BE SUPPORTED BY APPROVED CLEVIS TYPE HANGERS. MULTIPLE PIPE RUNS TO BE SUPPORTED BY APPROVED TRAPEZE TYPE HANGERS. DO NOT SUPPORT PIPING FROM OTHER PIPING OR STRUCTURAL JOIST BRIDGING. REVIEW STRUCTURAL DRAWINGS FOR ADDITIONAL INFORMATION. WHERE INSULATION OCCURS, DESIGN HANGERS TO PROTECT INSULATION FROM DAMAGE. MAXIMUM VERTICAL SPACING SHALL BE 10 FOOT. MAXIMUM HORIZONTAL SPACING FOR COPPER TUBING 1–1/2" AND SMALLER SHALL BE 6 FOOT AND FOR 2" AND LARGER SHALL BE 10 FOOT. MAXIMUM HORIZONTAL SPACING FOR CAST IRON PIPING SHALL BE 5 FOOT.

CLEANING, TESTING AND ADJUSTING

THIS CONTRACTOR SHALL FURNISH ALL LABOR, TOOLS, INSTRUCTIONS, AND SUPERVISION REQUIRED IN THE PERFORMANCE OF ALL TESTS. CLEANING AND MAKING NECESSARY ADJUSTMENTS TO OPERATION OF ALL FIXTURES AND EQUIPMENT.

RODDING SEWERS

ALL SANITARY SOIL AND STORM SEWER LINES, BOTH IN THE BUILDING AND OUT SHALL BE RODDED OUT AND FLUSHED OUT AFTER COMPLETION OF CONSTRUCTION AND PRIOR TO FINISH FLOOR BEING INSTALLED. ALL WORK MUST BE COMPLETED PRIOR TO SUBSTANTIAL COMPLETION. ALL FLOOR DRAIN AND CLEANOUT LOCATIONS MUST BE INCLUDED IN THIS WORK

PIPE SLOPE

BUILDING SEWERS SHALL BE RUN IN PRACTICAL ALIGNMENT AND AT A UNIFORM SLOPE OF NOT LESS THAN ONE–FOURTH (1/4) OF AN INCH PER FOOT TOWARD THE POINT OF DISPOSAL. WHEN APPROVED BY THE AUTHORITY HAVING JURISDICTION AND WHERE IT IS IMPRACTICAL, DUE TO THE DEPTH OF THE STREET SEWER OR TO THE STRUCTURAL FEATURES OR TO THE ARRANGEMENT OF ANY BUILDING OR STRUCTURE, TO OBTAIN A SLOPE OF ONE–FOURTH (1/4) OF AN INCH PER FOOT, ANY SUCH PIPE OR PIPING FOUR (4) INCHES THROUGH SIX (6) INCHES MAY HAVE A SLOPE OF NOT LESS THAN ONE–EIGHTH (1/8) INCH PER FOOT AND ANY SUCH PIPE OR PIPING EIGHT (8) INCHES AND LARGER MAY HAVE A SLOPE OF NOT LESS THAN ONE–SIXTEETH (1/16) INCH PER FOOT.

PIPING INSULATION

ALL COLD WATER PIPING, FITTINGS AND VALVES SHALL BE INSULATED WITH NOMINAL 1" WALL THICKNESS IMCOLOCK PIPE INSULATION, OR AN APPROVED EQUAL HAVING FLAME SPREAD RATING OF 25 OR LESS AND A SMOKE DENSITY OF 50 OR LESS WHEN TESTED BY ASTM E–84 METHOD.

ALL HOT WATER AND HOT WATER RETURN PIPING, FITTINGS AND VALVES SHALL BE INSULATED WITH NOMINAL 1" WALL THICKNESS IMCOLOCK PIPE INSULATION, HAVING A CONDUCTIVITY NOT EXCEEDING 0.28 BTU PER inch/h X ft^2 X °F.

IMCOLOCK PIPE INSULATION MAY BE SLIPPED ONTO THE PIPE PRIOR TO CONNECTION OR APPLIED AFTER THE PIPE IS INSTALLED, AT THE CONTRACTOR'S OPTION. ALL BUTT JOINTS AND MITER JOINTS SHALL BE CLOSED USING IMCOA'S FUSE SEAL JOINING SYSTEM OR FACTORY APPROVED CONTACT ADHESIVE. IMCOLOCK PIPE INSULATION SHALL BE INSTALLED ACCORDING TO THE PROCEDURES OUTLINED BY THE MANUFACTURER.

FITTING COVER INSULATION SHALL BE FABRICATED AND INSTALLED ACCORDING TO THE MANUFACTURER'S RECOMMENDED PROCEDURES. SWEAT FITTINGS SHALL BE INSULATED WITH MITER CUT PIECES OF IMCOLOCK PIPE INSULATION THE SAME SIZE AS ON ADJACENT PIPING. THREADED FITTINGS SHALL BE INSULATED WITH SLEEVED FITTING COVERS FABRICATED FROM MITER CUT PIECES OF IMCOLOCK PIPE INSULATION ACCORDING TO THE MANUFACTURER'S SLEEVING SIZE RECOMMENDATIONS AND SHALL BE OVERLAPPED 2" AND SEALED TO THE ADJACENT PIPE INSULATION. ALL VALVES SHALL BE INSULATED WITH CUT PIECES OF IMCOLOCK PIPE INSULATIONS. ALL JOINTS AND MITER CUT PIECES ARE TO BE SEALED USING IMCOA'S FUSE SEAL JOINING SYSTEM OR FACTORY APPROVED CONTACT ADHESIVE.

INSTALL THERMAL INSULATION ON CLEAN, DRY SURFACES AFTER ALL TESTING AND INSPECTION IS COMPLETED. INSTALLATION SHALL BE IN STRICT ACCORDANCE WITH THESE SPECIFICATIONS AND WITH MANUFACTURERS INSTRUCTIONS.

PIPING SLEEVES

ALL COPPER PIPES PASSING THROUGH CONCRETE OR CINDER WALLS AND FLOORS OR OTHER CORROSIVE MATERIAL SHALL BE PROTECTED AGAINST EXTERNAL CORROSION BY A PROTECTIVE SHEATHING OR WRAPPING OR OTHER MEANS THAT WILL WITHSTAND ANY REACTION FROM THE CORROSIVE MATERIAL. MINIMUM WALL THICKNESS OF MATERIAL SHALL BE 0.025 TO 0.0059 INCH.

PLUMBING FIXTURES

PROVIDE PLUMBING FIXTURES AS SPECIFIED OR EQUIVALENT APPROVED BY THE ENGINEER.

PIPE MATERIAL LIST

ABOVE GRADE, INSIDE BUILDING

DOMESTIC WATER PIPING

SEAMLESS ASTM B 88 TYPE L COPPER WATER TUBE WITH WROUGHT COPPER FITTINGS, ANSI B16.22. SOLDER MATERIAL SHALL BE 95.5 PERCENT LEAD FREE, ASTM B 32. THE USE OF DRILLED–T CONNECTIONS IS NOT PERMITTED.

SANITARY WASTE AND VENT PIPING

NO–HUB CAST IRON SOIL PIPE AND FITTING SYSTEM CONFORMING TO CISPI STANDARD NO. 301–04A. ELASTOMERIC SEALING SLEEVES SHALL CONFORM TO ASTM STANDARD C 564. COUPLINGS SHALL CONFORM TO CISPI STANDARD 310–04.

FIRE PIPING

SCHEDULE 40 ASTM A 53 BLACK STEEL PIPE AND FITTINGS OR AS APPROVED BY N.F.P.A. AND LOCAL CODES.

BELOW GRADE, INSIDE BUILDING

DOMESTIC WATER PIPING

ASTM B 88 TYPE K COPPER WATER TUBE WITH WROUGHT COPPER FITTINGS, ANSI B16.22. ALL JOINTS SHALL BE BRAZED.

SANITARY WASTE AND VENT PIPING

SCHEDULE 40 DWV POLYVINYL CHLORIDE PIPE AND FITTINGS CONFORMING TO ASTM D–1784–82 WITH SOLVENT WELDED JOINTS.

FIRE PIPING

DUCTILE IRON PIPE, CLASS 200 CONFORMING TO ASTM, AND RING–TITE FITTINGS AS APPROVED BY N.F.P.A. AND LOCAL CODES. PROVIDE CONCRETE THRUST BLOCKS AT CHANGES IN DIRECTION, ACCORDING TO THE PIPE MANUFACTURER'S RECOMMENDATIONS.

PLUMBING FIXTURE SPECIFICATION

TYPE:	WH–1
DESCRIPTION:	WALL HYDRANT, CONCEALED BOX TYPE, NON–FREEZE, 3/4" MALE HOSE THREAD OUTLET, SELF–DRAINING WITH ANTI–SIPHON VACUUM BREAKER. CHROME PLATED BRONZE HEAD CASTING HOUSED WITHIN SATIN FINISH NICKEL BRONZE BOX WITH LOCKING HINGED COVER. LOOSE TEE OPERATING KEY. MIFAB MHY–20.
ROUGH–IN:	3/4" COLD WATER. INSTALL WITH BOTTOM OF BOX AT 12" A.F.F. OR AS DIRECTED BY ARCHITECT / OWNER.
TYPE:	ECO
DESCRIPTION:	EXTERIOR CLEANOUT TO GRADE, BOTTOM OUTLET DUCTILE IRON BODY, ADJUSTABLE 6–1/2" DIAMETER DUCTILE IRON RING AND COVER WITH VANDAL–RESISTANT SCREWS. IF LOCATED IN ASPHALT OR DIRT PROVIDE 18" X 18" X 12" CONCRETE PAD. SIOUX CHIEF 834–64DIRV.
TYPE:	FCO
DESCRIPTION:	FLOOR CLEANOUT, BOTTOM OUTLET DUCTILE IRON BODY, ADJUSTABLE 6–1/2" DIAMETER NICKEL BRONZE RING AND COVER WITH VANDAL–RESISTANT SCREWS. SIOUX CHIEF 834–64DNRV.

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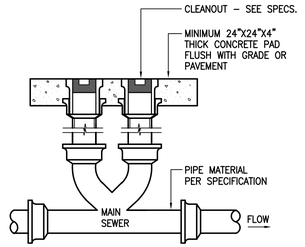
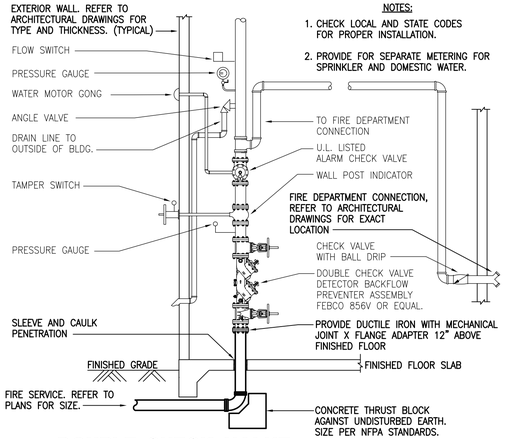
PLUMBING SCHEDULES, NOTES AND LEGENDS

Sheet No. P2.0



3 TWO-WAY EXTERIOR CLEANOUT
SCALE: NONE

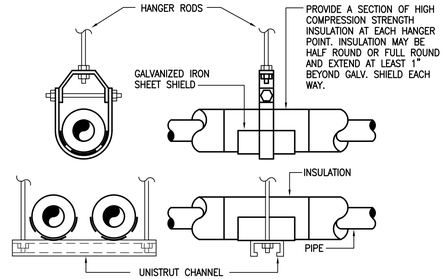
1



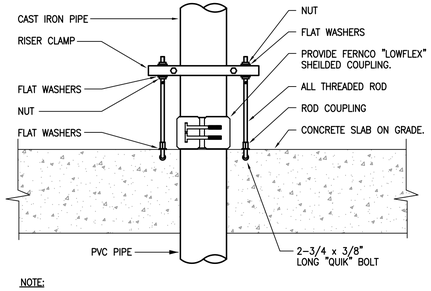
DOUBLE CHECK VALVE DETECTOR BACKFLOW-FIRE

X
SCALE: NONE

MINIMUM DIMENSIONS OF GALVANIZED SHEETMETAL PROTECTION SHIELDS AT PIPE HANGERS		
NOMINAL SIZE PIPE	SHIELD LENGTH (IN.)	GAUGE THICKNESS
1/2" & 3/4"	12	18
1" – 2-1/2"	12	18
3" – 4"	16	18
6"	18	16

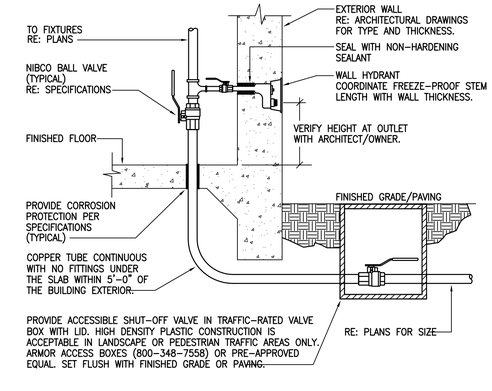


2 HANGER FOR INSULATED PIPING
SCALE: NONE



NOTE:
1. MAKE CONNECTION FROM PVC BELOW SLAB TO CAST IRON ABOVE SLAB WITH TRANSITION COUPLING.
2. THERE IS TO BE NO EXPOSED PVC ABOVE SLAB.

4 PVC TO CAST IRON CONNECTION
SCALE: NONE



1 DOMESTIC WATER ENTRY
SCALE: NONE

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PLUMBING DETAILS

Sheet No. P3.0

GENERAL NOTES

THE STRUCTURAL DRAWINGS DEPICT THE STRUCTURE IN ITS FINAL CONSTRUCTED CONFIGURATION. NEITHER CONSTRUCTION MEANS AND METHODS NOR CONSTRUCTION SAFETY ARE PART OF THE STRUCTURAL ENGINEER'S EXPERTISE OR SCOPE OF WORK. THE GENERAL CONTRACTOR AND HIS SUBCONTRACTORS ARE FULLY RESPONSIBLE FOR THE MEANS AND METHODS USED TO CONSTRUCT THE STRUCTURE AND FOR FULL COMPLIANCE WITH ALL JOB SAFETY RELATED REGULATIONS AND CONDITIONS AT THE SITE. LIMITED SITE VISITS, IF ANY, BY THE STRUCTURAL ENGINEER ARE SOLELY TO OBSERVE COMPLETED PARTS OF THE STRUCTURE. THE STRUCTURAL ENGINEER IS NEITHER QUALIFIED TO OBSERVE NOR COMMENT ON CONSTRUCTION MEANS AND METHODS AND JOB SITE SAFETY.

PRINCIPAL OPENINGS ARE SHOWN ON THE DRAWINGS. SEE ARCHITECTURAL, MECHANICAL AND ELECTRICAL DRAWINGS FOR OPENINGS, SLEEVES, CURBS, INSERTS, DEPRESSIONS, ETC., NOT SHOWN.

ALL DETAILS ARE TYPICAL UNLESS NOTED OTHERWISE. DETAILS SHALL APPLY TO ALL SIMILAR AND LIKE CONDITIONS.

SHOP DRAWINGS SHALL BE NEW DRAWINGS PRODUCED BY THE CONTRACTOR, ILLEGIBLE REPRODUCTIONS OF THE DESIGN DRAWINGS WILL BE REJECTED. ELECTRONIC FILES MAY BE PURCHASED FROM THE ENGINEER OF RECORD FOR THE PURPOSE OF PREPARING SHOP DRAWINGS. THE CONTRACTOR WILL BE REQUIRED TO SIGN AN INDEMNITY STATEMENT AND FEES FOR THE ELECTRONIC FILES SHALL BE PAID IN FULL PRIOR TO TRANSMISSION OF THE ELECTRONIC FILES TO THE CONTRACTOR. THE USE OF REPRODUCTIONS OF THESE CONTRACT DRAWINGS BY ANY CONTRACTOR, SUBCONTRACTOR, ERECTOR, FABRICATOR, OR MATERIAL SUPPLIER IN LIEU OF PREPARATION OF SHOP DRAWINGS SIGNIFIES HIS ACCEPTANCE OF ALL INFORMATION SHOWN HEREIN AS CORRECT, AND OBLIGATES HIMSELF TO ANY JOB EXPENSE, REAL OR IMPLIED, ARISING DUE TO ANY ERRORS OR OMISSIONS THAT MAY OCCUR HEREIN.

MINIMUM SHOP DRAWING SUBMITTAL REQUIREMENTS INCLUDE:

- CONCRETE MIX DESIGNS FOR EACH CLASS OF CONCRETE WITH TEST DATA
- CONCRETE ACCESSORIES (VAPOR RETARDER, REINFORCING SUPPORT CHAIRS, VOID FORMS, ETC.)
- CONCRETE REINFORCING SHOP DRAWINGS
- STRUCTURAL STEEL SHOP DRAWINGS
- STEEL STAIR SHOP DRAWINGS (SEALED BY A LICENSED ENGINEER)
- STEEL JOIST SHOP DRAWINGS
- STEEL DECK SHOP DRAWINGS
- TILT WALL LIFTING AND BRACING BOOKS (SEALED BY A LICENSED ENGINEER)
- PRE–ENGINEERED METAL BUILDING SHOP DRAWINGS (SEALED BY A LICENSED ENGINEER)
- COLD–FORMED TRUSS SHOP DRAWINGS (SEALED BY LICENSED ENGINEER)
- COLD–FORMED METAL STUDS AND CONNECTION SHOP DRAWINGS AND CALCULATIONS (SEALED BY LICENSED ENGINEER)

CRANES, CONCRETE TRUCKS AND ALL OTHER HEAVILY LOADED VEHICLES ARE NOT TO BE DRIVEN ACROSS GRADE BEAMS OR BUILDING SLABS.

ERECTION OF STRUCTURAL STEEL MAY NOT BEGIN UNTIL CONCRETE FOUNDATION HAS CURED FOR A MINIMUM OF THREE DAYS. STRUCTURAL STEEL OR OTHER HEAVY LOADS SHALL NOT BE STOCKPILED ON ANY SLAB UNTIL IT HAS CURED FOR A MINIMUM OF THREE DAYS.

NOTE THAT THE GROUND FLOOR SLAB IS A GROUND SUPPORTED SLAB AT GRADE AS PER THE DESIGN RECOMMENDED IN THE SOIL REPORT. IT IS NOT A STRUCTURAL SLAB AND AS SUCH IT IS NOT DESIGNED FOR ANY EXTERNAL UPWARD OR DOWNWARD LOADS, IT IS INTENDED TO BE ENTIRELY SUPPORTED BY THE PREPARED GROUND UNDER THE SLAB. THE CONTRACTOR SHOULD NOTE THAT THE PERFORMANCE OF THE SLAB AS DESIGNED AND INTENDED BY THE SOIL ENGINEER IS HIGHLY DEPENDENT ON HOW WELL THE CONTRACTOR FOLLOWS THE SITE PREPARATION INSTRUCTIONS IN THE SOIL REPORT. THE ARCHITECT SHALL ADVISE THE OWNER THAT THE PERFORMANCE OF THE SLAB INVOLVES SOME RISKS AND IS DEPENDENT ON MANY ENVIRONMENTAL CONDITIONS OVER WHICH THE OWNER HAS CONTROL OF AFTER OCCUPANCY OF THE BUILDING. THE CONTRACTOR AND THE OWNER SHOULD CONSULT WITH THE SOIL ENGINEER IF THERE ARE ANY QUESTIONS CONCERNING CONSTRUCTION, PERFORMANCE AND RISKS INVOLVED IN GROUND SUPPORTED SLAB AT GRADE CONSTRUCTION.

DESIGN CRITERIA:

BUILDING CODE: INTERNATIONAL BUILDING CODE, 2009 EDITION

LIVE LOAD:

ROOF: –––––––––––––– PSF

WIND LOAD:

VELOCITY –––––––––– 90 MPH THREE SECOND GUST
EXPOSURE –––––––––– B
IMPORTANCE FACTOR, Iw= 1.0
INTERNAL PRESSURE COEFFICIENT, Gcpi ––––– +/– 0.18

MAIN WIND FORCE RESISTING SYSTEM (MWFRS):
MAXIMUM HORIZONTAL INTERIOR PRESSURE –––– 10 PSF
MAXIMUM HORIZONTAL EXTERIOR PRESSURE –––– 13 PSF
(14'–0" FROM EACH CORNER)
MAXIMUM GROSS UPLIFT INTERIOR ZONE –––––– 11 PSF
MAXIMUM GROSS UPLIFT EXTERIOR ZONE ––––– 16 PSF
(14'–0" FROM EACH CORNER)

COMPONENTS AND CLADDING:
ROOF NET UPLIFT (EFFECTIVE WIND AREA 10 SQUARE FEET):
INTERIOR ZONE ––––––––––––––––––– 11 PSF
EXTERIOR ZONE ––––––––––––––––––– 25 PSF
CORNERS AND OVERHANGS ––––––––––– 37 PSF
(7'–0" FROM EACH CORNER)

COMPONENTS AND CLADDING:
ROOF NET UPLIFT (EFFECTIVE WIND AREA 100 SQUARE FEET):
INTERIOR ZONE ––––––––––––––––––– 13 PSF
EXTERIOR ZONE ––––––––––––––––––– 16 PSF
CORNERS AND OVERHANGS ––––––––––– 16 PSF
(7'–0" FROM EACH CORNER)

COMPONENTS AND CLADDING:
WALLS(EFFECTIVE WIND AREA 50 SQUARE FEET):
INTERIOR ZONE –––––––––––––––––– 14 PSF
CORNERS –––––––––––––––––––– 17 PSF
(7'–0" FROM EACH CORNER)

ALLOWABLE SOIL BEARING CAPACITY (AT 2'–0" BELOW FINISHED GRADE ON 24" MIN. OF SELECT FILL)

TOTAL LOAD –––– 2500 PSF
DEAD LOAD –––– 1700 PSF

EARTHWORK

1. SITE PREPARATION FOR THE BUILDING PAD SHALL CONSIST OF THE REMOVAL OF EXISTING PAVEMENT, VEGETATION, ORGANIC MATTER AND ANY ADDITIONAL MATERIAL AS NECESSARY TO PROVIDE THE REQUIRED AMOUNT OF FILL UNDER THE BUILDING AND EXTENDING OUT A MINIMUM OF 5'–0" BEYOND THE PERIMETER OF THE BUILDING.

2. THE SUBGRADE SHALL BE PROOFROLLED WITH A HEAVY, RUBBER–TIRED VEHICLE (STATIC WEIGHT OF AT LEAST 20 TONS AND WITH TIRE PRESSURES OF AT LEAST 90 PSI). THE CONTRACTOR SHALL MAKE AT LEAST TWO COMPLETE PASSES OVER THE AREA WITH THE SECOND PASS PERPENDICULAR TO THE FIRST PASS. AREAS OF THE SUBGRADE THAT ARE OBSERVED TO BE SO OR WEAK SHALL BE OVEREXCAVATED AND REPLACED WITH PROPERLY COMPACTED SELECT FILL.

3. SUBGRADE SHALL THEN BE SCARIFIED AND MOISTURE CONDITIONED TO AN EIGHT (8) INCH DEPTH AND THEN RECOMPACTED TO BETWEEN 95 AND 100 PERCENT OF THE MAXIMUM DRY DENSITY AS DETERMINED BY THE STANDARD PROCTOR DENSITY TEST (ASTM D698). THE MOISTURE CONTENT SHALL BE BETWEEN OPTIMUM AND +3 PERCENT OF THE OPTIMUM MOISTURE CONTENT. PROVIDE A MINIMUM OF FOUR (4) FIELD DENSITY TESTS ON THE SUBGRADE OR ONE (1) FOR EVERY 2,500 SQUARE FEET WHICHEVER IS GREATER.

4. SELECT FILL MATERIAL FOR THE BUILDING PAD SHALL BE AN INORGANIC CLAYEY SAND WITH A LIQUID LIMIT BETWEEN 26 AND 40 AND PLASTICITY INDEX BETWEEN 10 AND 20. STRUCTURAL SELECT FILL PAD MATERIAL SHALL BE TESTED FOR ACCEPTABILITY AND A MOISTURE DENSITY CURVE SHALL BE ESTABLISHED.

5. SELECT FILL SHALL BE PLACED IN EIGHT INCH LOOSE LIFTS AND COMPACTED TO 100 PERCENT OF THE MAXIMUM DRY DENSITY AS DETERMINED BY THE STANDARD PROCTOR DENSITY TEST (ASTM D1557) FOR FILL DEPTHS GREATER THAN 5'–0" AND BETWEEN 95 AND 100 PERCENT OF THE MAXIMUM DRY DENSITY AS DETERMINED BY THE STANDARD PROCTOR DENSITY TEST (ASTM D698) FOR FILL DEPTHS LESS THAN 5'–0". THE MOISTURE CONTENT SHALL BE BETWEEN –3 AND +3 PERCENT OF THE OPTIMUM MOISTURE CONTENT FOR SELECT FILL. SELECT FILL MATERIAL SHALL EXTEND TO THE BUILDING PERIMETER. PROVIDE A MINIMUM OF FOUR (4) FIELD DENSITY TESTS ON EACH LIFT OF SELECT FILL OR ONE (1) FOR EVERY 2,500 SQUARE FEET WHICHEVER IS GREATER.

6. SELECT FILL MATERIAL SHALL BE TESTED DURING PLACEMENT OF EACH LIFT FOR THE ATTERBERG LIMITS IN ACCORDANCE WITH ASTM D4318–98 METHOD B "STANDARD TEST METHOD FOR LIQUID LIMIT, PLASTIC LIMIT AND PLASTICITY INDEX OF SOILS" TO VERIFY THAT THE SELECT FILL MATERIAL IS IN ACCORDANCE WITH THE ORIGINALLY APPROVED SELECT FILL MATERIAL. PROVIDE A MINIMUM OF ONE (1) TEST PER LIFT OR ONE (1) FOR EVERY 2,500 SQUARE FEET WHICHEVER IS GREATER WITH A MAXIMUM OF TEN (10)PER LIFT.

8. CONTRACTOR SHALL MAINTAIN A CLEAN EXCAVATION THAT IS FREE OF WATER 100% OF THE TIME. CONTRACTOR SHALL PROVIDE PUMPS AS REQUIRED TO REMOVE ANY WATER AT ALL TIMES.

9. THE SITE SHALL BE GRADED TO PROVIDE POSITIVE DRAINAGE AWAY FROM THE BUILDING PAD DURING BUILDING PAD INSTALLATION AND WHEN THE BUILDING PAD AND BUILDING ARE COMPLETED.

10. PLUMBING AND UTILITY TRENCHES WITHIN THE BUILDING PAD SHALL HAVE PIPING BEDDED ON 6" MINIMUM OF CEMENT STABILIZED SAND WITH 4" MINIMUM ALL AROUND. BACKFILL IN UTILITY TRENCHES SHALL CONSIST OF COMPACTED SELECT FILL. PROVIDE A BENTONITE PLUG FOR THE FULL DEPTH AND WIDTH OF THE UTILITY TRENCH TO A MINIMUM OF 1'–0" ABOVE THE BOTTOM OF THE FOUNDATION AT THE EXTERIOR FACE OF BUILDING FOUNDATIONS WHERE UTILITY TRENCHES ENTER THE BUILDING.

11. PROVIDE A MINIMUM SIX (6) INCH CLAY CAP FOR A MINIMUM OF 5'–0" AROUND THE PERIMETER OF THE BUILDING. THE CAP SHALL EXTEND AS REQUIRED TO COVER THE LIMITS OF THE EXCAVATION AND SELECT FILL BUILDING PAD MATERIALS.

SITE DRAINAGE

1. GRADE THE SITE TO PROVIDE POSITIVE DRAINAGE AWAY FROM ALL BUILDINGS AND SLABS. WATER SHALL NOT BE ALLOWED TO POND ADJACENT TO THE BUILDING FOUNDATIONS OR SLABS.

2. DOWNSPOUTS FROM ROOF DRAINS AND GUTTERS SHALL BE COLLECTED AND PIPED AWAY FROM THE BUILDING. WHEN WATER IS NOT PIPED AWAY FROM THE BUILDING, DOWNSPOUTS SHALL DUMP ONTO A CAST IN PLACE 4" THICK X 3'–0" WIDE CONCRETE SWALE REINFORCED WITH #4 AT 12" ON CENTER EACH WAY AND EXTENDING 10'–0" OUT FROM THE BUILDING.

3. TREES AND VEGETATION SHALL NOT BE ALLOWED WITHIN A DISTANCE EQUAL TO THREE QUARTERS THEIR ULTIMATE HEIGHT AWAY FROM THE BUILDING.

4. IRRIGATE VEGETATION AND SOILS ADJACENT TO BUILDING (NO MORE THAN 15 MINUTES THREE TIMES A WEEK)ON AN AS NEEDED BASIS TO MAINTAIN UNIFORM SOIL MOISTURE CONDITIONS AROUND THE PERIMETER OF THE BUILDING FOLLOWING CONSTRUCTION.

FOUNDATIONS

1. PREPARED GRADE AREA UNDER ALL BUILDING SLABS AND GRADE BEAMS SHALL BE COVERED WITH A 15 MIL WATER VAPOR RETARDER MEETING THE REQUIREMENTS OF ASTM E 1745 (LATEST EDITION), CLASS A OR BETTER WITH MAXIMUM WATER PERMEANCE OF 0.01 PERMS WHEN TESTED IN ACCORDANCE WITH ASTM E96. THE WATER VAPOR RETARDER SHALL BE INSTALLED AND LAPPED AND TAPED IN ACCORDANCE WITH THE REQUIREMENTS OF ASTM E 1643 (LATEST EDITION). PENETRATIONS SHALL SEALED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS AND REQUIREMENTS.

2. FOUNDATION DETAILING SHOWN ON THE DRAWINGS IS BASED ON A FOUNDATION DESIGN SPECIFIED IN THE SOIL REPORT BY TERRACON CONSULTANTS, INC., REPORT NO. 96185224, DATED AUGUST 24, 2018. THE RECOMMENDATIONS CONTAINED IN THE SOIL REPORT SHALL NOT SUPERCEDE THE REQUIREMENTS SHOWN ON THE DESIGN DRAWINGS OR IN THE SPECIFICATIONS WHEN THE REQUIREMENTS SHOWN IN THE DRAWINGS ARE GREATER THAN THOSE SHOWN IN THE GEOTECHNICAL REPORT. THE CONTRACTOR IS REQUIRED TO SECURE A COPY OF THE GEOTECHNICAL REPORT FROM THE OWNER AND HAVE A COPY ON THE JOB SITE AT ALL TIMES FOR HIS USE AND REFERENCE.

3. FOUNDATION DETAILING SHOWN ON THE DRAWINGS IS BASED ON A MINIMUM OF SEVEN FEET OF SELECT FILL MATERIAL BENEATH THE FLOOR SLAB AND EXTENDING TO 5'–0" BEYOND THE BUILDING PERIMETER.

4. ALL BACKFILL FOR BURIED PIPES AND CONDUIT WITHIN THE BUILDING PAD AND EXTENDING OUT MINIMUM 5'–0" BEYOND THE BUILDING SHALL BE BACKFILLED WITH SELECT FILL BACKFILL. DO NOT USE SAND BACKFILL. A 2'–0" WIDE BENTONITE PLUG SHALL BE PROVIDED IN ALL UTILITY TRENCHES AT THE FACE OF THE BUILDING FOUNDATION. SEE DETAIL 2/S4.2 FOR DETAIL AT PIPE BUILDING ENTRY.

5. CONDUITS SHALL NOT BE PLACED IN THE CONCRETE SLAB. CONDUITS SHALL BE PLACED IN THE SELECT FILL MATERIAL BENEATH THE VAPOR RETARDER. ALL PENETRATIONS OF THE VAPOR RETARDER SHALL BE SEALED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS AND REQUIREMENTS.

6. ALL FOOTINGS SHALL BE CONSOLIDATED WITH A CONCRETE VIBRATOR AS PER THE REQUIREMENTS OF ACI 318 AND ACI 308R, LATEST EDITION.

7. FOOTINGS SHALL BE POURED IMMEDIATELY UPON COMPLETION OF EXCAVATION AND CLEANING OF FOOTING BEARING SURFACE. ALL SPOILS FROM THE SPREAD FOOTING EXCAVATIONS SHALL BE REMOVED FROM THE BUILDING PAD.

8. WHERE A FOOTING IS SHOWN ON THE PLAN CLOSER THAN 6'–0 FROM ANOTHER FOOTING, EXCAVATE ONE FOOTING, FILL WITH CONCRETE AND LET CURE 24 HOURS PRIOR TO EXCAVATING THE ADJACENT FOOTING. (6'–0" DIMENSION IS MEASURED BETWEEN EDGE OF SPREAD FOOTING NOT CENTER TO CENTER.)

CONCRETE

1. ALL CONCRETE REINFORCING BARS SHALL CONFORM TO ASTM A615, GRADE 60, EXCEPT WHERE NOTED. NO. 3 BARS SHALL CONFORM TO ASTM A615, GRADE 40. DEFORMED BAR ANCHORS SHALL CONFORM TO ASTM A496, GR 70.

2. CONCRETE IN THE FOLLOWING AREAS SHALL HAVE SAND AND CRUSHED CARBONATE AGGREGATE CONFORMING TO ASTM C33, TYPE 1 PORTLAND CEMENT, FLYASH CONFORMING TO ASTM C618, CLASS 'C' UP TO 20 PERCENT REPLACEMENT BY VOLUME AND THE FOLLOWING DESIGNATED COMPRESSIVE STRENGTH (f'c) IN 28 DAYS:

UNDERREAM FOOTINGS ––––– 3000 PSI (w/c = 0.50 MAX)
SLABS ON GRADE –––––––– 3000 PSI (w/c = 0.45 MAX)
ALL OTHER CONCRETE ––––– 3000 PSI (w/c = 0.50 MAX)
TILT WALLS –––––––––––– 2500 PSI AT LIFTING

CONCRETE SUPPLIER SHALL BE AWARE OF CEMENTS THAT CAN CAUSE LATE ETTRINGITE FORMATION IN THE CEMENT PASTE AND BE PREPARED TO SHOW THAT THE CEMENTS USED WILL NOT CAUSE THIS PROBLEM.

3. ALL WELDED WIRE FABRIC SHALL BE SMOOTH ROUND WIRE IN FLAT SHEETS AND SHALL CONFORM TO ASTM A185.

4. CONCRETE PROTECTION FOR REINFORCEMENT SHALL BE AS FOLLOWS; SEE SEC. 7.7 ACI 318, LATEST EDITION FOR CONDITIONS NOT NOTED. PROVIDE CHAIR SUPPORTS (AZTEC CASTLE CHAIR, WHC SERIES 'B' OR EQUAL) TO ADEQUATELY SUPPORT BARS FOR PROPER CLEARANCE AS RECOMMENDED BY THE AMERICAN CONCRETE INSTITUTE AND THE CONCRETE REINFORCING STEEL INSTITUTE. SLAB ON GRADE REINFORCEMENT SHALL BE SUPPORTED AT 45–INCH MAXIMUM INTERVALS OR EVERY THIRD BAR.

FOOTINGS ––––––––––– 3 IN.
GRADE BEAMS –––––––– 3 IN. BOT., 2 IN. SIDE (3" EARTH FORMED), 2" IN. TOP
SLAB ON GRADE ––––––– 1 IN. TOP

5. NO HORIZONTAL JOINTS WILL BE PERMITTED IN CONCRETE EXCEPT WHERE THEY NORMALLY OCCUR OR WHERE NOTED. VERTICAL JOINTS SHALL OCCUR AT CENTER SPANS OR AT LOCATIONS APPROVED BY THE STRUCTURAL ENGINEER.

6. DETAILING OF CONCRETE REINFORCEMENT AND ACCESSORIES SHALL BE IN ACCORDANCE WITH ACI PUBLICATION 315, LATEST EDITION. ALL HOOKED BARS SHOWN IN DETAILS SHALL HAVE STANDARD HOOKS UNLESS NOTED OTHERWISE.

7. REINFORCING BARS SHALL NOT BE WELDED WITHOUT APPROVAL OF THE STRUCTURAL ENGINEER.

8. UNLESS OTHERWISE NOTED CONTINUOUS BOTTOM REINFORCING BARS SHALL BE SPLICED AT SUPPORTS AND CONTINUOUS TOP REINFORCING BARS SHALL BE SPLICED AT MID–SPAN.

9. ALL CONTINUOUS REINFORCEMENT SHALL LAP 40 BAR DIAMETERS AT SPLICES. PROVIDE 1–#6x6'–0" TOP AND BOTTOM (TWO 36" LEGS WITH 90 DEGREE BEND) AT EACH FACE OF GRADE BEAMS AT CORNERS AND INTERSECTIONS, AND AT 18" ON CENTER VERTICALLY AT WALLS.

10. CONDUITS ARE NOT ALLOWED IN SLABS, BEAMS, WALLS OR COLUMNS. ALL CONDUITS SHALL BE SUSPENDED FROM OR ATTACHED TO THE CONCRETE STRUCTURE.

11. ALL MIXING, TRANSPORTING, PLACING AND CURING OF CONCRETE SHALL BE DONE IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE AMERICAN CONCRETE INSTITUTE, ACI 301, LATEST EDITION.

12. ALL BASE PLATES AND ANCHOR RODS SHALL BE PROTECTED WITH 3" (MIN.) OF CONCRETE. ANCHOR RODS SHALL BE FABRICATED FROM FULL BODIED STEEL RODS CONFORMING TO ASTM F1554 GR 36, WASHERS CONFORMING TO ASTM F884 AND NUTS CONFORMING TO ASTM A194 OR A563 AND HAVING THE SAME DIAMETER AS THE BOLT DIAMETER AND USING CUT THREADS. ROLLED THREADS ARE NOT ACCEPTABLE. BOLTS SHALL BE SET USING RIGID TEMPLATES.

TILT-UP CONCRETE WALL PANELS:

1. GENERAL CONTRACTOR SHALL REVIEW AND VERIFY ALL PANEL DIMENSIONS, OPENINGS, BEAM AND JOIST POCKET LOCATIONS, WELD PLATE LOCATIONS AND REPORT ANY DISCREPANCIES TO THE STRUCTURAL ENGINEER OF RECORD PRIOR TO CASTING PANELS.

2. THE PANELS ARE DRAWN VIEWED FROM THE INTERIOR, UNLESS NOTED OTHERWISE, AND SHALL BE CAST WITH THE EXTERIOR FACE DOWN.

3. EXPOSED EDGES SHALL BE CHAMFERED, EXCEPT AT INSIDE FACE OF OVERHEAD DOORS. SEE ARCHITECTURAL DRAWINGS AND COORDINATE ALL PANEL FINISHES, REVEALS, CHAMFERS, ETC.

4. THE PANELS HAVE BEEN DESIGNED FOR THE IN SERVICE CONDITIONS ONLY. ADDITIONAL REINFORCEMENT, STRONG BACKS, ETC. MAY BE REQUIRED FOR LIFTING. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR PANEL LIFTING DESIGN AND METHODS. THE CONTRACTOR SHALL DISTRIBUTE CRANE LOADS ON THE SLAB ON GRADE IN SUCH A MANNER SO AS NOT TO CRACK OR OTHERWISE DAMAGE THE SLAB.

5. LIFTING INSERTS VISIBLE AFTER FINAL CONSTRUCTION SHALL BE PATCHED AND FINISHED TO MEET THE ARCHITECT'S APPROVAL.

6. TEMPORARY BRACING OF PANELS SHALL NOT BE REMOVED UNTIL AFTER GROUT HAS BEEN INSTALLED BETWEEN THE PANEL AND THE CONCRETE FOOTING, THE SLAB LEAVE OUT HAS BEEN POURED, ALL PERMANENT CONNECTIONS OF THE FLOOR AND ROOF FRAMING TO THE TILT WALL PANELS HAVE BEEN MADE AND THE FLOOR AND ROOF DIAPHRAGM CONSTRUCTION HAS BEEN COMPLETED.

7. PROVIDE 1–#5 (FOR EACH MAT OF STEEL) CONTINUOUS AT THE TOP AND SIDES OF PANELS. AT THE HEAD, JAMBS AND SILLS OF ALL OPENINGS AND EACH FUTURE KNOCK OUT OPENING, PROVIDE 2–#6 (1 NS AND 1 FS) THAT EXTEND 24 INCHES MINIMUM PAST THE LIMITS OF THE OPENINGS.

8. PROVIDE 2–#6 BOTTOM WITH STANDARD HOOK EACH END FOR SPANDREL PANELS AND ALL FULL HEIGHT PANELS.

9. PROVIDE 1–#5 X 4'–0" (FOR EACH MAT OF STEEL) DIAGONAL BAR AT THE CORNERS OF ALL OPENINGS, FUTURE KNOCKOUT OPENINGS, AND AT THE CORNER OF NOTCHES IN PANELS.

10. UNLESS OTHERWISE NOTED, PROVIDE 3–#6 FULL HEIGHT BARS AT GIRDER OR BEAM BEARING LOCATIONS.

11. MINIMUM PANEL REINFORCEMENT SHALL BE AS FOLLOWS EXCEPT WHERE SHOWN OTHERWISE ON THE DRAWINGS.

PANEL STRUCTURAL THICKNESS	REINFORCEMENT
5 1/2" TO 6 3/4"	#5 AT 12" OC VERT #4 AT 14" OC HORIZ
7" TO 8 1/4"	#6 AT 12" OC VERT #4 AT 12" OC HORIZ
8 1/2" TO 11 1/4"	#5 AT 12" OC VERT EA FACE #4 AT 12" OC HORIZ EA FACE

12. THE VERTICAL BARS SHALL BE CENTERED IN THE PANEL. ALLOW 1 1/2" CLEAR COVER FOR PANELS WITH TWO LAYERS OF REINFORCING. SEE PANEL ELEVATIONS FOR ADDITIONAL REINFORCING REQUIREMENTS.

STRUCTURAL STEEL

1. ALL GROUT USED UNDER STEEL COLUMN BASE PLATES SHALL BE OF NON–SHRINKABLE TYPE CONFORMING TO ASTM C1090 AND THE CORPS OF ENGINEERS SPECIFICATION CRD–C–621 AND SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 6000 PSI. 100 PERCENT OF VOID UNDER ALL BASE PLATES IS TO BE GROUTED. ALL BASE PLATES WITH A DIMENSION GREATER THAN 24" SHALL HAVE TWO 1" DIAMETER GROUT HOLES. IF THE SPACE UNDER A COLUMN BASE PLATE IS LESS THAN 1/4", A PRESSURE INJECTION SYSTEM SHALL BE USED.

2. ALL STRUCTURAL STEEL DESIGN, DETAILING, FABRICATION AND ERECTION SHALL CONFORM TO ALLOWABLE STRENGTH DESIGN (ASD) ACCORDING TO THE 2005 AISC SPECIFICATION.

3. ALL WELDING SHALL CONFORM TO THE STANDARDS OF THE THIRTEENTH EDITION OF THE MANUAL OF STEEL CONSTRUCTION OF THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION, AND THE AMERICAN WELDING SOCIETY ANSI/AWS D1.1 STRUCTURAL WELDING CODE–STEEL. WELDING OF REINFORCING BARS SHALL COMPLY TO THE AMERICAN WELDING SOCIETY AWS D1.4. SHORT CIRCUIT TRANSFER FOR THE GAS METAL ARC WELDING PROCESS IS NOT PERMITTED.

4. ELECTRODES FOR ALL FIELD AND SHOP WELDING SHALL BE CLASS E70XX.

5. ALL STRUCTURAL STEEL ROLLED SHAPES SHALL CONFORM TO ASTM A992, AND ALL ANGLES, BARS, CHANNELS AND PLATES SHALL CONFORM TO ASTM A36. ALL SQUARE AND RECTANGULAR TUBES (Fy 46KSI) SHALL CONFORM TO ASTM A500 GRADE B AND ROUND PIPES(Fy 36KSI) SHALL CONFORM TO ASTM A53 GR B. ALL COLD–FORMED GIRTS AND PURLINS SHALL CONFORM TO ASTM A570M GR. 55.

6. ALL STRUCTURAL STEEL DETAILS AND CONNECTIONS SHALL CONFORM TO STANDARDS OF THE AISC. DOUBLE CONNECTIONS THROUGH COLUMN WEBS, BEAMS THAT FRAME OVER THE TOP OF COLUMNS, AND BEAM TO BEAM CONNECTIONS SHALL HAVE A BEAM ERECTION SEAT OR A STAGGERED CONNECTION WITH AT LEAST ONE INSTALLED BOLT REMAINING IN PLACE TO SUPPORT THE FIRST BEAM WHILE THE SECOND BEAM IS BEING ERECTED.

7. CONNECTIONS NOT DETAILED ON THE DRAWINGS SHALL BE SELECTED FROM THE TABLES IN PART 10 OF THE THIRTEENTH EDITION OF THE MANUAL OF STEEL CONSTRUCTION OF THE AISC. TABLE 10–1 MAY BE USED FOR ALL–BOLTED DOUBLE ANGLE CONNECTIONS. TABLE 10–2 MAY BE USED FOR WELDED/BOLTED DOUBLE ANGLE CONNECTIONS. TABLE 10–3 MAY BE USED FOR ALL–WELDED DOUBLE ANGLE CONNECTIONS. BEAM REACTIONS USED SHALL BE ONE–HALF THE TOTAL ALLOWABLE UNIFORM LOAD GIVEN IN TABLE 3–6 THROUGH 3–9 IN PART 3 OF THE MANUAL OF STEEL CONSTRUCTION OF THE AISC. CONNECTIONS FOR COMPOSITE BEAMS SHALL HAVE THE STANDARD AISC CAPACITY INCREASED BY 35 PERCENT.

8. ALL MISCELLANEOUS WELDS (FIELD OR SHOP) SHALL BE MINIMUM SIZE FILLET ALL AROUND IN ACCORDANCE WITH AISC. WELDING OF CONTINUOUS MEMBERS SHALL BE A MINIMUM OF 2 INCHES OF 3/16 INCH FILLET STITCH WELDS AT 12 INCHES O.C., STAGGERED EACH SIDE, UNLESS OTHERWISE NOTED. COLUMN BASE PLATES, CAP PLATES AND STIFFENER PLATES SHALL BE WELDED ALL AROUND.

9. PROVIDE ALL NECESSARY HOLES IN MISCELLANEOUS STRUCTURAL STEEL MEMBERS FOR ATTACHMENT OF NON–STRUCTURAL ITEMS (IE: HOLES FOR WINDOW HEAD ANCHORS), SEE ARCHITECTURAL DRAWINGS FOR REQUIREMENTS.

10. SPLICING OF STRUCTURAL STEEL MEMBERS WHERE NOT DETAILED IS PROHIBITED WITHOUT PRIOR APPROVAL OF THE STRUCTURAL ENGINEER.

11. ALL CONNECTION BOLTS FOR STRUCTURAL STEEL MEMBERS SHALL CONFORM TO ASTM A325 EXCEPT WHERE NOTED OTHERWISE. MINIMUM SIZE SHALL BE 3/4 INCH DIAMETER UNLESS NOTED OTHERWISE. BOLTS SHALL BE DIRECT TENSION INDICATING BOLTS CONFORMING TO ASTM F1852 WITH HARDENED WASHERS UNDER THE NUT AND SACRIFICIAL SPLINES. HEX NUTS SHALL CONFORM TO ASTM A563 AND WASHERS SHALL CONFORM TO ASTM F436.

12. SHOP BOLTED CONNECTIONS ARE PERMISSIBLE IF SUFFICIENT BOLT CLEARANCE IS AVAILABLE FOR TIGHTENING OF HIGH STRENGTH BOLTS. CLEARANCES SHALL BE IN ACCORDANCE WITH TABLE 7–16 AND 7–17 OF THE THIRTEENTH EDITION OF THE MANUAL OF STEEL CONSTRUCTION OF THE AISC. ALL STEEL MEMBERS AND ASSEMBLIES SHALL BE SHOP FABRICATED TO THE GREATEST EXTENT POSSIBLE. TRUSSES SHALL BE FULLY SHOP ASSEMBLED. FIELD SPLICES FOR SHIPPING SHALL ONLY BE AS APPROVED BY THE ENGINEER OF RECORD. THE STEEL FABRICATOR AND THE STEEL ERECTOR SHALL COORDINATE THE SHOP FABRICATION, SHIPPING AND ERECTION OF ALL STRUCTURAL MEMBERS AND ASSEMBLIES.

13. ALL OPEN–WEB STEEL JOISTS AND BRIDGING SHALL CONFORM TO THE STEEL JOIST INSTITUTE SPECIFICATIONS FOR THE JOIST TYPES INDICATED. JOISTS SHALL BE CAMBERED. AMOUNT OF CAMBER SHALL BE IN ACCORDANCE WITH THE STEEL JOIST INSTITUTE SPECIFICATIONS. JOIST SUPPLIER SHALL ADJUST CAMBERS AT JOISTS ADJACENT TO EACH OTHER WITH VARYING LENGTHS AND AT JOISTS ADJACENT TO STEEL BEAM LINES OF SET ELEVATION SO THAT ELEVATIONS PRIOR TO ERECTION OF DECK DO NOT VARY BY MORE THAN 1" FOR ADJACENT MEMBERS. JOISTS ENDS SHALL BE STAGGERED FOR NARROW BEAMS TO ACHIEVE 2 1/2–INCH MINIMUM BEARING. STEEL FABRICATOR SHALL PROVIDE JUMPER PLATE AND STIFFENER PLATE TO MATCH BEAM FLANGE THICKNESS OFF BEAM FLANGE AS REQUIRED AT SKEWED JOIST LOCATIONS TO PROVIDE JOIST MINIMUM BEARING REQUIREMENTS. JOISTS REQUIRING REPAIR OR MODIFICATION DUE TO FABRICATION ERROR OR DAMAGE DURING SHIPPING SHALL BE REPLACED WITH NEW JOISTS.

14. JOIST BRIDGING SHALL BE WELDED TO STEEL BEAMS OR DECK SUPPORT ANGLES AT ENDS. AT JOIST SPANS WHERE CALLED FOR ON THE DRAWINGS OR WHERE REQUIRED BY SJI, BOLTED DIAGONAL BRIDGING NEAREST THE CENTER OF THE SPAN SHALL BE INSTALLED AT EACH JOIST PRIOR TO THE SLACKENING OF HOISTING LINES.

15. JOISTS SPANNING FORTY (40) FEET AND GREATER OR REQUIRING BRIDGING PER SJI SHALL HAVE AT LEAST ONE END FIELD BOLTED TO THE SUPPORT STRUCTURE BEFORE HOISTING CABLES ARE RELEASED. JOISTS SPANNING OVER SIXTY (60) FEET SHALL HAVE BOTH ENDS FIELD BOLTED TO THE SUPPORT STRUCTURE. FINAL ATTACHMENT SHALL BE IN PLACE AND BRIDGING INSTALLED PER THE REQUIREMENTS OF OSHA CONSTRUCTION SAFETY AND HEALTH STANDARDS, SUBPART R, 29 CFR 1926 BEFORE HOISTING CABLES ARE RELEASED. FINAL ATTACHMENT OF ALL JOISTS TO THE SUPPORT STRUCTURE SHALL BE WELDED PER SJI SPECIFICATIONS.

16. EXTEND BOTTOM CHORD OF THE THREE JOISTS NEAREST EACH COLUMN UNLESS SHOWN OTHERWISE AND BOTH ENDS OF JOIST SHALL BE FIELD BOLTED TO THE SUPPORT STRUCTURE BEFORE HOISTING CABLES ARE RELEASED. PROVIDE A 6"x6" STABILIZER PLATE TO RECEIVE JOIST BOTTOM CHORD AT ALL COLUMN LOCATIONS; THE PLATE SHALL EXTEND A MINIMUM OF 3" BELOW JOIST BOTTOM CHORD. PROVIDE A 13/16" DIAMETER HOLE IN STABILIZER PLATE FOR GUYING CABLES. PROVIDE WT6X15 OFF BEAM BOTTOM FLANGE TO RECEIVE JOIST BOTTOM CHORD EXTENSION AT JOIST LOCATED ADJACENT TO COLUMN. BOTTOM CHORD EXTENSION MATERIAL SHALL BE L2x2x1/4 MINIMUM.

17. ROOF SYSTEM OVER OPEN–WEB STEEL JOISTS SHALL BE RIGID INSULATION BOARD ON 1 1/2" DEEP, 22 GAGE, TYPE B GALVANIZED (CONFORMING TO ASTM A924–94, WITH MINIMUM COATING CLASS OF G90 AS DEFINED IN ASTM A653–94) DECK FROM COLD ROLLED STEEL CONFORMING TO ASTM A653–99 OR ASTM A611 WITH Fy=33 KSI, AND HAVING A MINIMUM MOMENT OF INERTIA OF 0.169 INCH TO THE FOURTH PER FOOT OF WIDTH. SIDELAPS SHALL BE FASTENED WITH #10 TEKS AT THIRD POINTS OR 1'–8" ON CENTER MAX. DECK ATTACHMENT SHALL BE HILTI X–EDNK22 THQ12 (1/8"–1/4" INCLUSIVE), X–EDN19 THQ12 (3/16"–3/8" INCLUSIVE), OR X–ENP19 (1/4" OR THICKER) AS RECOMMENDED BY THE MANUFACTURER OR WELD DECK THROUGH 5/8" DIAMETER PUDDLE WELDS TO SUPPORTING MEMBERS AT 1'–0" ON CENTER AT END LAPS AND AT INTERMEDIATE SUPPORTS. AT SPANDREL BEAMS OR DECK SUPPORT ANGLES AND FOR A 10'–0" SQUARE AREA AT CORNERS WELD DECK TO ALL SUPPORTS AT 6" ON CENTER.

18. STEEL DECK SHALL ALWAYS BE INSTALLED WITH DIRECTION OF FLUTES PERPENDICULAR TO STEEL FRAMING MEMBERS. DECK SHALL BE CUT TO INSURE A MINIMUM OF THREE SPANS PER DECK WIDTH.

19. ALL BRICK SUPPORT ANGLES ARE DESIGNED TO FULLY SUPPORT THE BRICK VENEER WITH SOME NORMAL DEFLECTION AS THE BRICK IS INSTALLED. BRICK SHALL BE INSTALLED WITHOUT SHORING THE SUPPORT ANGLE DURING CONSTRUCTION. SHORING THE BRICK DURING CONSTRUCTION CAN RESULT IN HORIZONTAL BED JOINT CRACKING WHEN THE SHORES ARE REMOVED.

20. HEADED ANCHORS SHALL BE MANUFACTURED FROM COLD DRAWN WIRE CONFORMING TO ASTM A108, GR.50 WITH FLUXED ENDS. STUDS SHALL BE AUTOMATICALLY END WELDED WITH SUITABLE STUD WELDING EQUIPMENT IN ACCORDANCE WITH AWS D1.1. STUDS FOR EMBEDDED PLATES AND OTHER ANCHORS SHALL BE SHOP WELDED. STUDS FOR COMPOSITE BEAMS SHALL BE FIELD WELDED.

21. ALL STRUCTURAL STEEL WHICH IS OUTSIDE THE BUILDING ENVELOPE SHALL BE HOT DIPPED GALVANIZED. ZINC COATING SHALL MEET THE REQUIREMENTS OF ASTM 123–73, WITH A MINIMUM COATING CLASS OF GR100 AND SHALL BE APPLIED AFTER FABRICATION. ALL FIELD WELDS SHALL BE GROUND SMOOTH AND TOUCHED UP WITH ZINC RICH PAINT.

22. STEEL COLUMNS SHALL BE SPLICED A MINIMUM OF 4'–0" ABOVE THE FINISH FLOOR IN STORIES WHERE SPLICES OCCUR. COLUMNS SHALL BE SPLICED EVERY TWO LEVELS. COLUMNS SHALL HAVE A HOLES FOR 3/4" DIAMETER SAFETY CABLES OR PLATES WITH A HOLE WELDED TO THE COLUMN. PROVIDE AN L3x3x1/4 DECK SUPPORT ANGLE ON ALL SIDES OF THE COLUMN.

23. THE GENERAL CONTRACTOR AND HIS SUBCONTRACTOR'S SHALL COMPLY TO OSHA 29 CFR 1926 SUBPART R, SAFETY STANDARDS FOR STEEL ERECTION.

24. AS SCOPE AND PERFORMANCE DOCUMENTS, THE DRAWINGS AND SPECIFICATIONS DO NOT INDICATE OR DESCRIBE ALL OF THE WORK REQUIRED FOR THE PERFORMANCE AND COMPLETION OF THIS WORK. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR THE FABRICATION AND INSTALLATION OF ALL MISCELLANEOUS METAL ITEMS INDICATED, DESCRIBED, OR IMPLIED ON THE STRUCTURAL AND/OR THE ARCHITECTURAL DRAWINGS. MISCELLANEOUS STEEL ITEMS, WITHIN AN ASSEMBLY AND NOT ATTACHED TO THE STRUCTURE, ARE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR AND HIS SUBCONTRACTORS WHETHER THEY ARE SHOWN OR NOT SHOWN ON THE ARCHITECTURAL OR STRUCTURAL DRAWINGS. SUCH ASSEMBLIES INCLUDE BUT ARE NOT LIMITED TO, EXTERIOR AND INTERIOR WALL ASSEMBLIES, CEILING ASSEMBLIES, PARTITION ASSEMBLIES, SHELF AND CABINET ASSEMBLIES AND ALL OTHER SIMILAR ASSEMBLIES. ANY MISCELLANEOUS METAL ITEMS INDICATED ON THE ARCHITECTURAL DRAWINGS AND NOT SHOWN ON STRUCTURAL DRAWINGS SHALL BE A MINIMUM OF L4x4x1/2", C7x9.8, 3/8" PLATE OR TS4x4x3/8" UNLESS OTHERWISE APPROVED BY THE STRUCTURAL ENGINEER.

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GENERAL NOTES

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MASONRY NOTES

1. ALL CONCRETE MASONRY UNITS SHALL BE HOLLOW LOAD BEARING UNITS CONFORMING TO THE REQUIREMENTS OF ASTM C90, TYPE 1 AND THE QUALITY CONTROL STANDARDS OF THE CONCRETE MASONRY ASSOCIATION.
2. ALL CONCRETE MASONRY SHALL HAVE LIGHTWEIGHT MASONRY UNITS WITH A DRY DENSITY OF NOT MORE THAN 105 POUNDS PER CUBIC FOOT.
3. ALL MASONRY UNITS SHALL HAVE A MINIMUM NET COMPRESSIVE STRENGTH OF 2500 PSI AND A MINIMUM NET TENSILE STRENGTH OF NOT LESS THAN 125 PSI, WHEN TESTED IN ACCORDANCE WITH THE METHODS SET FORTH IN THE QUALITY CONTROL STANDARDS OF THE CONCRETE MASONRY ASSOCIATION.
4. MASONRY UNITS SHALL HAVE CURED FOR NOT LESS THAN 28 DAYS WHEN PLACED IN THE STRUCTURE.
5. ALL MASONRY UNITS SHALL HAVE A MAXIMUM LINEAR SHRINKAGE OF .065 OF 1% FROM THE SATURATED TO THE OVEN DRY CONDITION, WHEN TESTED IN ACCORDANCE WITH THE METHODS SET FORTH IN THE QUALITY CONTROL STANDARDS OF THE CONCRETE MASONRY ASSOCIATION.
6. MORTAR SHALL BE FRESHLY PREPARED AND UNIFORMLY MIXED IN THE RATIO OF 1 PART PORTLAND CEMENT, 1/4 PART MINIMUM TO 1/2 PART MAXIMUM LIME PUTTY OR HYDRATED LIME, DAMP LOOSE SAND NOT LESS THAN 2–1/4 AND NOT MORE THAN 3 TIMES THE SUM OF THE VOLUMES OF THE CEMENT AND LIME USED, AND SHALL CONFORM TO ASTM C270, TYPE 'S'.
7. GROUT FOR POURING SHALL BE OF FLUID CONSISTENCY AND MIXED IN THE RATIO BY VOLUMES, 1 PART PORTLAND CEMENT, 2 1/4 PARTS MINIMUM TO 3 PARTS MAXIMUM DAMP LOOSE SAND, 1 PART MINIMUM TO 2 PARTS MAXIMUM PEA GRAVEL, AND 0 TO 1/10 PART MAXIMUM HYDRATED LIME. MIX SHALL CONFORM TO ASTM C 476 WITH A 28–DAY COMPRESSIVE STRENGTH OF 2500 PSI. MAXIMUM GROUT HEIGHT SHALL BE 4'–0".
8. GROUT FOR PUMPING SHALL BE OF FLUID CONSISTENCY AND SHALL HAVE NOT LESS THAN 7 SACKS OF CEMENT IN EACH CUBIC YARD OF GROUT. THE MIX SHALL BE SUBMITTED FOR APPROVAL.
9. THE COMPRESSIVE STRENGTH OF THE MASONRY (f'm) SHALL BE 1800 PSI.
10. ALL CELLS WITH REINFORCING BARS SHALL BE GROUTED SOLID.
11. ALL CELLS SHOWN TO HAVE DRILLED EXPANSION ANCHORS, EMBEDDED HEADED STUDS OR OTHER EMBEDDED ANCHORS SHALL BE GROUTED SOLID.
12. HORIZONTAL JOINT REINFORCEMENT SPACED AT 16" O.C. MAX. VERTICALLY SHALL CONFORM TO ASTM A951 WITH A MINIMUM YIELD STRENGTH OF 70,000 PSI AND A MINIMUM SIZE OF 9 GAGE FOR SIDE RODS AND 9 GAGE FOR TRUSS RODS.
13. OPENINGS IN MASONRY WALLS SHALL HAVE EITHER MASONRY OR STEEL LINTELS AS DETAILED ON THE DRAWINGS. WHEN NO LINTEL IS DETAILED A MINIMUM OF 2–#4 BARS IN A SOLID GROUTED LINTEL BLOCK SHALL BE INSTALLED. THE BARS SHALL EXTEND A MINIMUM OF EIGHT INCHES BEYOND THE EDGE OF THE OPENING AND THE JAMB AT EACH SIDE OF THE OPENING SHALL BE GROUTED SOLID FOR A DISTANCE OF EIGHT INCHES WITH A #5 VERTICAL MINIMUM AT EACH JAMB. LAP BARS 2'–0" MIN. OR 40 BAR DIAMETERS AT SPLICES, INTERSECTIONS AND CORNERS. STEEL LINTELS SHALL BEAR 8" MINIMUM AT EACH END ON FLASHING ABOVE AND BELOW THE ANGLE. VERTICAL CONTROL JOINTS SHALL EXTEND UP FROM THE END OF THE STEEL LINTEL, UNLESS 15# FELT OR FLASHING IS PROVIDED TOP AND BOTTOM OF LINTEL ANGLE WHERE ANGLE BEARS ON BRICK.
14. LINTEL BLOCKS SHALL BE "U" SHAPED UNITS WITH SOLID BOTTOMS AND ARE TO BE USED OVER WINDOW AND DOOR OPENINGS. BOND BEAM BLOCKS SHALL BE OPEN BOTTOM UNITS AND ARE TO BE USED AT THE TOPS OF WALLS AND AT THE MID–HEIGHT OF WALL OR AT 8'–0" ON CENTER VERTICALLY MAXIMUM UNLESS NOTED OTHERWISE ON THE DRAWINGS. PROVIDE 2–#4 BARS IN A SOLID GROUTED BOND BEAM UNLESS NOTED OTHERWISE. LINTEL BLOCKS SHALL NOT BE USED IN PLACE OF BOND BEAM BLOCKS.
15. ALL MASONRY TIES TO BACKUP STRUCTURE SHALL BE HOT DIP GALVANIZED. PROVIDE A HECKMANN NO. 315 ANCHOR WITH NO. 316 TRIANGULAR TIE ON COLUMNS AT 16" (15" AT KING SIZE BRICK) ON CENTER VERTICALLY AND A HECKMANN NO. 191 OR 192 ANCHOR ON EACH SIDE ALL BEAMS AT 16" ON CENTER HORIZONTALLY UNLESS NOTED OTHERWISE ON THE DRAWINGS. MASONRY TIES TO WALL STUDS SHALL BE A HECKMANN NO. 316 TRIANGULAR TIE WITH A HECKMANN NO. 315–C SCREW ON ANCHOR STRAP OR HECKMANN #77 WING NUT POS–I–TIE ANCHOR SPACED 16" (15" AT KING SIZE BRICK) ON CENTER HORIZONTALLY AND 16" ON CENTER VERTICALLY. AT ALL CORNERS AND INTERSECTIONS PROVIDE TWO VERTICAL ROWS OF ANCHORS SPACED 16" APART AND 16" ON CENTER VERTICALLY. TRIANGULAR TIES SHALL EXTEND 3/4" FROM FACE OF MASONRY. ANCHOR STRAPS SHALL BE ATTACHED TO METAL STUDS WITH TWO (2) #10–16x 1 1/2" CADMIUM PLATED HEX HEAD SHEET METAL SCREWS WITH NEOPRENE WASHER.
16. MASONRY WALLS SHALL HAVE VERTICAL CONTROL JOINTS AT APPROXIMATELY SIXTEEN (16) FEET ON CENTER AND FOUR (4) FEET MAXIMUM FROM CORNERS. COORDINATE THE LOCATION OF JOINTS WITH THE ARCHITECT. PROVIDE HECKMANN NO. 351 CONTROL JOINT ANCHORS AT 16" ON CENTER VERTICALLY AT BRICK MASONRY AND HECKMANN NO. 350 CONTROL JOINT ANCHORS AT 16" ON CENTER VERTICALLY AT CONCRETE MASONRY UNITS.
17. AT FREE VERTICAL EDGES OF WALLS PROVIDE 1–#5 VERTICAL IN GROUT FILLED END CORE, UNLESS NOTED OTHERWISE ON THE DRAWINGS.
18. PROVIDE A MINIMUM OF #4 AT 48" ON CENTER VERTICAL WALL REINFORCING AND DOWELS IN FULLY GROUTED CELLS AT ALL EXTERIOR AND INTERIOR WALLS UNLESS A GREATER REINFORCING IS SHOWN ON THE PLANS OR IN THE DETAILS. PROVIDE 1/2" DIAMETER DEFORMED BAR ANCHORS AT 48" ON CENTER WELDED TO STRUCTURAL MEMBERS SUPPORTING MASONRY ABOVE UNLESS NOTED OTHERWISE ON THE DRAWINGS.
19. PROVIDE HOHMANN AND BARNARD RB–8 (OR EQUAL) REBAR POSITIONERS AT EVERY THIRD COURSE AND AT SPLICE LOCATIONS.
20. ALL MASONRY DESIGN IS BASED CHAPTER 21 OF INTERNATIONAL BUILDING CODE, LATEST EDITION AND ACI 530, LATEST EDITION.

COLD-FORMED STEEL NOTES

1. COLD–FORMED STEEL JOISTS AND ACCESSORIES SHALL CONFORM TO ASTM A446 LATEST EDITION, GRADE A, C OR D. COLD–FORMED STEEL MEMBERS SHALL CONFORM TO THE LATEST EDITION OF THE SPECIFICATION FOR THE DESIGN OF COLD–FORMED STRUCTURAL MEMBERS. MINIMUM YIELD STRESS SHALL BE 33,000 FOR GRADE A, 40,000 PSI FOR GRADE C AND 50,000 PSI FOR GRADE D.
2. PLYWOOD WALL SHEATHING OVER COLD–FORMED STEEL STUDS SHALL BE APA RATED CD INTERIOR WITH EXTERIOR GLUE, THICKNESS AS SHOWN ON THE DRAWINGS. SPAN RATING SHALL BE 32/16. SCREW PLYWOOD AT 4" O.C. ALONG PANEL EDGES AND 12" O.C. AT INTERMEDIATE SUPPORTS AND BLOCKING WITH 1 15/16 INCH 8–18 PILOT POINT BUGLE HEAD SCREWS UNLESS NOTED OTHERWISE ON THE DRAWINGS. EXTERIOR GYPSUM SHEATHING (SEE ARCHITECTURAL DRAWINGS) SHALL BE SCREWED AT 4" O.C. ALONG PANEL EDGES WITH 1 15/16 INCH 8–18 PILOT POINT BUGLE HEAD SCREWS.
3. ROOF SYSTEM OVER COLD–FORMED TRUSSES SHALL BE APA RATED CD INTERIOR WITH EXTERIOR GLUE, THICKNESS AS SHOWN ON THE DRAWINGS. SPAN RATING SHALL BE 32/16. INSTALL PLYWOOD WITH FACE GRAIN ACROSS SUPPORTS. SCREW PLYWOOD TO JOISTS WITH 1 15/16 INCH LONG #8–18 PILOT POINT BUGLE HEAD SCREWS WITH CLIMASEAL COATING AT 6" O.C. (4" O.C. IN COASTAL ZONES) ALONG PANEL EDGES AND 1'–0" O.C. AT INTERMEDIATE SUPPORTS AND BLOCKING.
4. COLD–FORMED WALL STUDS SHALL CONFORM TO ASTM A446 LATEST EDITION, GRADE A, C OR D. COLD–FORMED STEEL MEMBERS SHALL CONFORM TO THE LATEST EDITION OF THE SPECIFICATION FOR THE DESIGN OF COLD–FORMED STRUCTURAL MEMBERS, MINIMUM YIELD STRESS SHALL BE 33,000 FOR GRADE A, 40,000 PSI FOR GRADE C AND 50,000 PSI FOR GRADE D. STUD BRACING SHALL CONSIST OF A 1 1/2 INCH, 16 GAGE 'U' CHANNEL SPACED AT 4'–0" ON CENTER VERTICALLY WITH A 1 1/2 INCH x 1 1/2 INCH BY 16 GAGE CLIP ANGLE WITH TWO (2) #10–16 SCREWS TO BRIDGING AND STUD OR BRIDGECLIP AS MANUFACTURED BY THE STEEL NETWORK.
5. PROVIDE TRIPLE STUDS AT ALL CORNERS AND AT ALL BEAM BEARINGS THROUGH TO FOUNDATION UNLESS NOTED OTHERWISE.
6. ANCHOR METAL RUNNER TRACK 18 GA. MINIMUM TO CONCRETE WITH .145" DIAMETER BY 1 1/2" EMBED HILTI X–DNI POWDER DRIVEN PINS AT 12" ON CENTER. SPACE PINS AT 9" ON CENTERS WITHIN 12'–0" OF BUILDING CORNERS. PROVIDE A MINIMUM OF TWO PINS PER PIECE OF TRACK AND PROVIDE ONE PIN 6" MAXIMUM FROM ENDS OF TRACK.
7. TRUSS MANUFACTURER SHALL SUBMIT DRAWINGS FOR APPROVAL SHOWING ALL MEMBER FORCES, SIZES AND CONNECTORS. DRAWINGS SHALL BE SEALED BY A LICENSED ENGINEER IN THE STATE WHERE THE PROJECT IS LOCATED. ALL TEMPORARY AND PERMANENT BRACING OF THE TRUSSES SHALL BE DESIGNED AND DETAILED BY A LICENSED ENGINEER.
8. TYPICAL TRUSS LOADING IS SHOWN ON THE DRAWINGS. THE MANUFACTURER SHALL EXAMINE THE DRAWINGS FOR SPECIAL CONDITIONS AND/OR LOADS NOT SHOWN AND PROVIDE FOR SUCH IN THE DESIGN.
9. CONTRACTOR SHALL PROVIDE AND INSTALL ALL NECESSARY BRACING FOR COLD–FORMED TRUSSES.
10. PLANS AND DETAILS FOR FRAMING ARE A SCHEMATIC REPRESENTATION OF THE FRAMING AT VARIOUS LOCATIONS AND CONDITIONS ON THIS PROJECT. THE CONTRACTOR SHALL NOT SCALE OR COUNT FRAMING MEMBERS SHOWN AS A SUBSTITUTE FOR SHOP DRAWINGS AND AN ACCURATE QUANTITY TAKEOFF. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL FRAMING NECESSARY TO COMPLETELY FRAME THE PROJECT AND PROVIDE FOR ALL CONDITIONS SHOWN ON THE ARCHITECTURAL DRAWINGS.
11. JOIST AND RAFTER HANGERS, TIES, HOLDDOWNS AND OTHER PRE–ENGINEERED CONNECTORS SHALL BE "SIMPSON STRONG–TIE" OR APPROVED EQUAL. SIZE AND USAGE SHALL BE AS SHOWN ON THE DRAWINGS, SPECIFIED IN THESE NOTES AND AS RECOMMENDED BY THE MANUFACTURER.

STRUCTURAL TESTING AND INSPECTIONS

EARTHWORK TESTING

1. DURING EARTHWORK OPERATIONS KEEP A COMPETENT TRAINED TECHNICIAN ASSIGNED TO THE PROJECT. SERVICES PROVIDED SHALL INCLUDE:
   A. OBSERVE STRIPPING OPERATIONS AND EVALUATE THE REQUIRED STRIPPING DEPTH DURING THESE OPERATIONS.
   B. OBSERVE PROOFROLLING OPERATIONS AFTER SITE STRIPPING. DETERMINE IF ANY SOFT SPOTS NEED TO BE UNDERCUT TO FIRM SOILS, REPLACED WITH SELECT FILL AND RECOMPACTED.
   C. VERIFY THAT THE SUBGRADE SHALL THEN BE SCARIFIED AND MOISTURE CONDITIONED TO A SIX (6) INCH DEPTH AND THEN RECOMPACTED TO BETWEEN 95 AND 100 PERCENT OF THE MAXIMUM DRY DENSITY AS DETERMINED BY THE STANDARD PROCTOR DENSITY TEST (ASTM D698). THE MOISTURE CONTENT SHALL BE BETWEEN OPTIMUM AND +3 PERCENT OF THE OPTIMUM MOISTURE CONTENT. PROVIDE A MINIMUM OF FOUR (4) FIELD DENSITY TESTS ON THE SUBGRADE OR ONE (1) FOR EVERY 2,500 SQUARE FEET WHICHEVER IS GREATER.
   D. STRUCTURAL SELECT FILL PAD MATERIAL SHALL BE TESTED FOR ACCEPTABILITY AND A MOISTURE DENSITY CURVE SHALL BE ESTABLISHED. SELECT FILL MATERIAL SHALL BE AN INORGANIC CLAYEY SAND CLAY WITH LIQUID LIMIT BETWEEN 26 AND 40 AND PLASTICITY INDEX BETWEEN 10 AND 20.
   E. SELECT FILL SHALL BE PLACED IN EIGHT INCH LOOSE LIFTS AND COMPACTED TO 100 PERCENT OF THE MAXIMUM DRY DENSITY AS DETERMINED BY THE STANDARD PROCTOR DENSITY TEST (ASTM D698) FOR FILL DEPTHS GREATER TEHAN 5'–0" AND COMPACTED TO BETWEEN 95 AND 100 PERCENT OF THE MAXIMUM DRY DENSITY AS DETERMINED BY THE STANDARD PROCTOR DENSITY TEST (ASTM D698) FOR FILL DEPTHS LESS THAN 5'–0". THE MOISTURE CONTENT SHALL BE BETWEEN –3 AND +3 PERCENT OF THE OPTIMUM MOISTURE CONTENT FOR SELECT FILL. VERIFY THAT SELECT FILL MATERIAL EXTENDS TO 5'–0" BEYOND THE BUILDING PERIMETER.
   F. SELECT FILL MATERIAL SHALL BE TESTED DURING PLACEMENT OF EACH LIFT FOR THE ATTERBERG LIMITS IN ACCORDANCE WITH ASTM D4318–98 METHOD B "STANDARD TEST METHOD FOR LIQUID LIMIT, PLASTIC LIMIT AND PLASTICITY INDEX OF SOILS" TO VERIFY THAT THE SELECT FILL MATERIAL IS IN ACCORDANCE WITH THE ORIGINALLY APPROVED SELECT FILL MATERIAL. PROVIDE A MINIMUM OF ONE (1) TEST PER LIFT OR ONE (1) FOR EVERY 2,500 SQUARE FEET WHICHEVER IS GREATER WITH A MAXIMUM OF TEN (10) PER LIFT.
   H. OBSERVE THE EXCAVATION DAILY AND ENSURE THAT THE CONTRACTOR MAINTAINS A CLEAN EXCAVATION THAT IS FREE OF WATER 100% OF THE TIME. CONTRACTOR SHALL PROVIDE PUMPS AS REQUIRED TO REMOVE ANY WATER AT ALL TIMES.
   I. OBSERVE GRADING OPERATIONS TO ENSURE THAT PROPER DRAINAGE AWAY FROM THE BUILDING PAD IS PROVIDED.

SPREAD FOOTINGS TESTING

1. DURING SPREAD FOOTING OPERATIONS KEEP A COMPETENT TRAINED TECHNICIAN ASSIGNED TO THE PROJECT. SERVICES PROVIDED SHALL INCLUDE:
   A. OBSERVING THE BOTTOM OF FOOTING FOR CLEANLINESS.
   B. CHECKING FOOTING BOTTOM FOR PROPER BEARING MATERIAL.
   C. NOTING DEPTH AND SIZE OF ALL FOOTINGS.
   D. VERIFY QUANTITY, SIZE AND LOCATION OF REINFORCEMENT AND CLEAR COVER REQUIREMENTS.
   E. CHECK FOR CAVING OF FOOTING WALLS.
   F. CHECKING THAT THE PILASTER IS CONCENTRIC WITH THE FOOTING.
   G. CHECKING THAT COLUMN OR GRADE BEAM DOWELS ARE LOCATED PROPERLY.
2. ENSURE THAT THE SPOILS FROM THE FOOTING EXCAVATIONS ARE REMOVED FROM THE BUILDING PAD.

CONCRETE TESTING

1. CONCRETE MIX DESIGNS SHALL BE SUBMITTED FOR REVIEW INDICATING CONFORMANCE WITH ACI 318, LATEST EDITION, CHAPTER 5, SECTION 5.3.
2. SLUMP TESTS, CONFORMING TO ASTM C143, SHALL BE TAKEN AT THE POINT OF DISCHARGE AT THE SAME RATE AS NOTED BELOW IN NOTE NUMBER 5.
3. AIR CONTENT TESTS CONFORMING TO ASTM C173, VOLUMETRIC METHOD FOR LIGHTWEIGHT OR NORMAL WEIGHT CONCRETE; ASTM C231 PRESSURE METHOD FOR NORMAL WEIGHT CONCRETE; SHALL BE TAKEN FOR EACH DAY'S POUR OF EACH TYPE OF AIR–ENTRAINED CONCRETE.
4. CONCRETE TEMPERATURE SHALL BE TESTED HOURLY WHEN AIR TEMPERATURE IS 40 DEG F (4 DEG C) AND BELOW, WHEN 80 DEG F (27 DEG C) AND ABOVE, AND EACH TIME A SET OF COMPRESSION TEST SPECIMENS IS MADE.
5. ONE SET OF FOUR COMPRESSION TEST SPECIMENS CONFORMING TO ASTM C31 SHALL BE MOLDED AND STORED FOR LABORATORY–CURED SPECIMENS. COMPRESSIVE STRENGTH TESTS SHALL CONFORM TO ASTM C39 AND SHALL CONSIST OF ONE SET FOR EACH DAY'S POUR EXCEEDING 5 CU. YDS. PLUS ADDITIONAL SETS FOR EACH 50 CU. YDS. MORE THAN THE FIRST 25 CU. YDS OF EACH CONCRETE CLASS PLACED IN ANY ONE DAY. ONE SPECIMEN SHALL BE TESTED AT 7 DAYS, TWO SPECIMENS SHALL BE TESTED AT 28 DAYS, AND ONE SPECIMEN SHALL BE RETAINED FOR LATER TESTING AS REQUIRED.
6. VERIFY CONCRETE IS BEING CONSOLIDATED IN ACCORDANCE WITH THE RECOMMENDATIONS OF ACI 318 AND ACI 309R, LATEST EDITION.
7. VERIFY THAT POST INSTALLED ANCHORS ARE AS SPECIFIED AND THAT ANCHORS ARE INSTALLED PER THE MANUFACTURER'S RECOMMENDATIONS AND REQUIREMENTS.

REINFORCING STEEL INSTALLATION

1. DURING CAST–IN–PLACE CONCRETE STRUCTURAL MEMBER REINFORCING PLACEMENT OPERATIONS KEEP A COMPETENT TRAINED TECHNICIAN ASSIGNED TO THE PROJECT. INSPECT REINFORCING UTILIZING ACI 311.4R "GUIDE FOR CONCRETE INSPECTION" AS A GUIDE. SERVICES PROVIDED SHALL INCLUDE:
   A. VERIFY TYPE AND GRADE OF ALL REINFORCING STEEL.
   B. VERIFY REBAR IS FREE OF OIL, DIRT, EXCESSIVE RUST AND FROM DAMAGE IN SHIPMENT TO SITE.
   C. VERIFY REINFORCING IS ADEQUATELY TIED, CHAIRED AND SUPPORTED TO PREVENT DISPLACEMENT DURING CONCRETE PLACEMENT.
   D. VERIFY MINIMUM AND MAXIMUM CLEAR DISTANCES BETWEEN BARS AND MINIMUM STRUCTURAL DISTANCE TO OUTSIDE OF CONCRETE.
   E. VERIFY QUANTITY, SIZE AND LOCATION OF REINFORCEMENT.
   F. VERIFY MINIMUM CONCRETE COVER IS MAINTAINED BETWEEN REBAR AND SURFACE OF CONCRETE.
   G. VERIFY SIZE AND PLACEMENT OF REBAR. VERIFY LAP LENGTHS, LOCATIONS AND STAGGERS AND VERIFY BENDS FOR MINIMUM DIAMETER, SLOPE AND LENGTH. VERIFY HOOKED BAR LENGTHS AND LOCATIONS.

STRUCTURAL STEEL TESTING

1. CERTIFY WELDERS FOR THE WELD TYPES IN THE PROJECT AND CONDUCT INSPECTIONS AND TESTS AS REQUIRED, AS A MINIMUM, WELDERS SHALL BE AISC CERTIFIED. RECORD TYPES AND LOCATIONS OF DEFECTS FOUND IN WORK. RECORD WORK REQUIRED AND PERFORMED TO CORRECT DEFICIENCIES.
2. VISUALLY INSPECT 100% OF ALL FILLET WELDS.
3. VISUALLY INSPECT 100% OF ALL FULL PENETRATION WELDS, TEST 20% OF ALL FULL PENETRATION WELDS BY ONE OF THE FOLLOWING METHODS: LIQUID PENETRANT INSPECTION (ASTM E165), MAGNETIC PARTICLE INSPECTION (ASTM E709; PERFORMED ON THE ROOT PASS AND ON THE FINISHED WELD; CRACKS AND ZONES OF INCOMPLETE FUSION OR PENETRATION IS NOT ACCEPTABLE), RADIOGRAPHIC INSPECTION (ASTM E94 AND ASTM E142; MINIMUM QUALITY LEVEL OF "2–2T"), OR ULTRASONIC INSPECTION (ASTM E164). IF FAILURE RATE IS 20% OR GREATER, TEST 100% OF WELDS AT CONTRACTOR'S EXPENSE UNTIL FAILURE RATE FALLS BELOW 20%.
4. ALL WELDS THAT FAIL SHALL BE REWELDED AND RETESTED UNTIL THEY PASS THE TEST. TEST TWO ADDITIONAL WELDS AT THE CONTRACTOR'S EXPENSE FOR EVERY WELD FAILURE.
5. BOLTS SHALL BE VISUALLY INSPECTED WHEN TWIST–OFF SPLINES ARE USED, OTHERWISE BOLTS SHALL BE SNUG TIGHT.
6. ALL FULL PENETRATION WELDS AT MOMENT CONNECTIONS REQUIRING TESTING SHALL BE TESTED AND CERTIFIED BY AN INDEPENDENT TESTING LABORATORY USING NON–DESTRUCTIVE TESTING METHODS. FOR SHOP WELDS, CERTIFICATION SHALL BE SUBMITTED PRIOR TO SHIPPING TO THE JOB SITE. FOR FIELD WELDS, CERTIFICATION SHALL BE SUBMITTED PRIOR FLOOR DECK INSTALLATION AND CONCRETE PLACEMENT AND PRIOR TO COVERING CONNECTIONS WITH FIREPROOFING OR ARCHITECTURAL FINISHES.

STRUCTURAL TESTING AND INSPECTIONS (CONTINUED)

MASONRY TESTING

1. MASONRY TESTING SHALL CONSIST OF A QUALIFIED TESTING LABORATORY PROVIDING THE FOLLOWING SERVICES:
   A. VERIFY QUANTITY, SIZE AND SPACING OF REQUIRED REINFORCING SHOWN ON THE DRAWINGS.
   B. OBSERVE THE INSTALLATION OF MASONRY UNITS.
   C. INSPECTION OF GROUT SPACE, IMMEDIATELY PRIOR TO CLOSING OF CLEANOUTS AND PRIOR TO ALL GROUTING OPERATIONS. VERIFY THAT THE SPECIFIED CELLS HAVE BEEN FULLY GROUTED.
   D. MONITOR THE PROPORTIONING, MIXING AND CONSISTENCY OF MORTAR AND GROUT. PROVIDE 28 DAY COMPRESSIVE STRENGTH TESTS ON EACH GROUT MIX IN ACCORDANCE WITH ASTM C1019. COMPRESSION TEST MASONRY PRISMS FOR EACH TYPE OF WALL CONSTRUCTION IN ACCORDANCE WITH ASTM C1314. CONTRACTOR SHALL PREPARE ONE SET OF PRISMS FOR TESTING AT 28 DAYS. TESTS ARE TO BE CONDUCTED FOR EACH 2000 SQUARE FEET OF WALL INSTALLED, BUT NOT LESS THAN TWO TESTS.

SPECIAL INSPECTIONS

SPECIAL INSPECTION WORK AND THE FINAL LETTER OF COMPLIANCE HAVE NOT BEEN INCLUDED IN THE STRUCTURAL ENGINEER OF RECORD'S SCOPE OF SERVICES. THE OWNER IS RESPONSIBLE FOR OBTAINING THE SERVICES OF THE SPECIAL INSPECTOR AND THE TESTING LABORATORY. SPECIAL INSPECTIONS CAN BE PROVIDED BY AN INDEPENDENT SPECIAL INSPECTOR APPROVED BY THE BUILDING AUTHORITY OR BY THE ENGINEER OF RECORD. THE SPECIAL INSPECTION WORK DOES NOT INCLUDE THE TESTING LABORATORY SERVICES AS CALLED FOR ON THE DRAWINGS. ARRANGEMENTS FOR SPECIAL INSPECTIONS SHOULD BE MADE PRIOR TO THE COMMENCEMENT OF CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE FOR NOTIFYING THE OWNER IF SPECIAL INSPECTIONS ARE REQUIRED ON THE APPROVED PERMIT DRAWINGS AND FOR NOTIFYING THE TESTING LABORATORY AND SPECIAL INSPECTOR IN A TIMELY MANNER PRIOR TO PROCEEDING WITH CONSTRUCTION OPERATIONS. THE CONTRACTOR SHALL NOT PROCEED WITH ANY WORK REQUIRING INSPECTIONS WITHOUT THE TESTING LABORATORY'S OR SPECIAL INSPECTOR'S PRESENCE. THE STRUCTURAL ENGINEER WILL NOT PROVIDE A FINAL LETTER OF COMPLIANCE AFTER THE WORK IS COMPLETE UNLESS HE HAS PERFORMED THE SPECIAL INSPECTIONS.

CHAPTER 17 OF THE 2009 INTERNATIONAL BUILDING CODE IS INTERPRETED TO REQUIRE SPECIAL INSPECTION FOR THE FOLLOWING ITEMS:

SOILS (SECTION 1704.7):

SITE PREPARATION	SECTION 1704.7.1
FILL PLACEMENT	SECTION 1704.7.2
EVALUATION OF IN–PLACE DENSITY	SECTION 1704.7.3

CONCRETE CONSTRUCTION (SECTION 1704.4/TABLE 1704.4):

MATERIALS	SECTION 1704.4.1
REINFORCING INSTALLATION PLACEMENT	TABLE 1704.4.1
BOLTS EMBEDDED IN CONCRETE	TABLE 1704.4.3

STEEL CONSTRUCTION (SECTION 1704.3):

INSPECTION OF FABRICATORS	SECTION 1704.2
STRUCTURAL WELDING	SECTION 1704.3.1
DETAILS	SECTION 1704.3.2
INSTALLATION OF HIGH–STRENGTH BOLTS	SECTION 1704.3.3

MASONRY CONSTRUCTION (SECTION 1704.5/TABLE 1704.5.1)

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SHELL BUILDING & SITE WORK DEVELOPMENT

720/722 US 79 WEST TOWNWEST COMMONS
HUTTO, TX 78634

Project No.	18064
Drawn	FP
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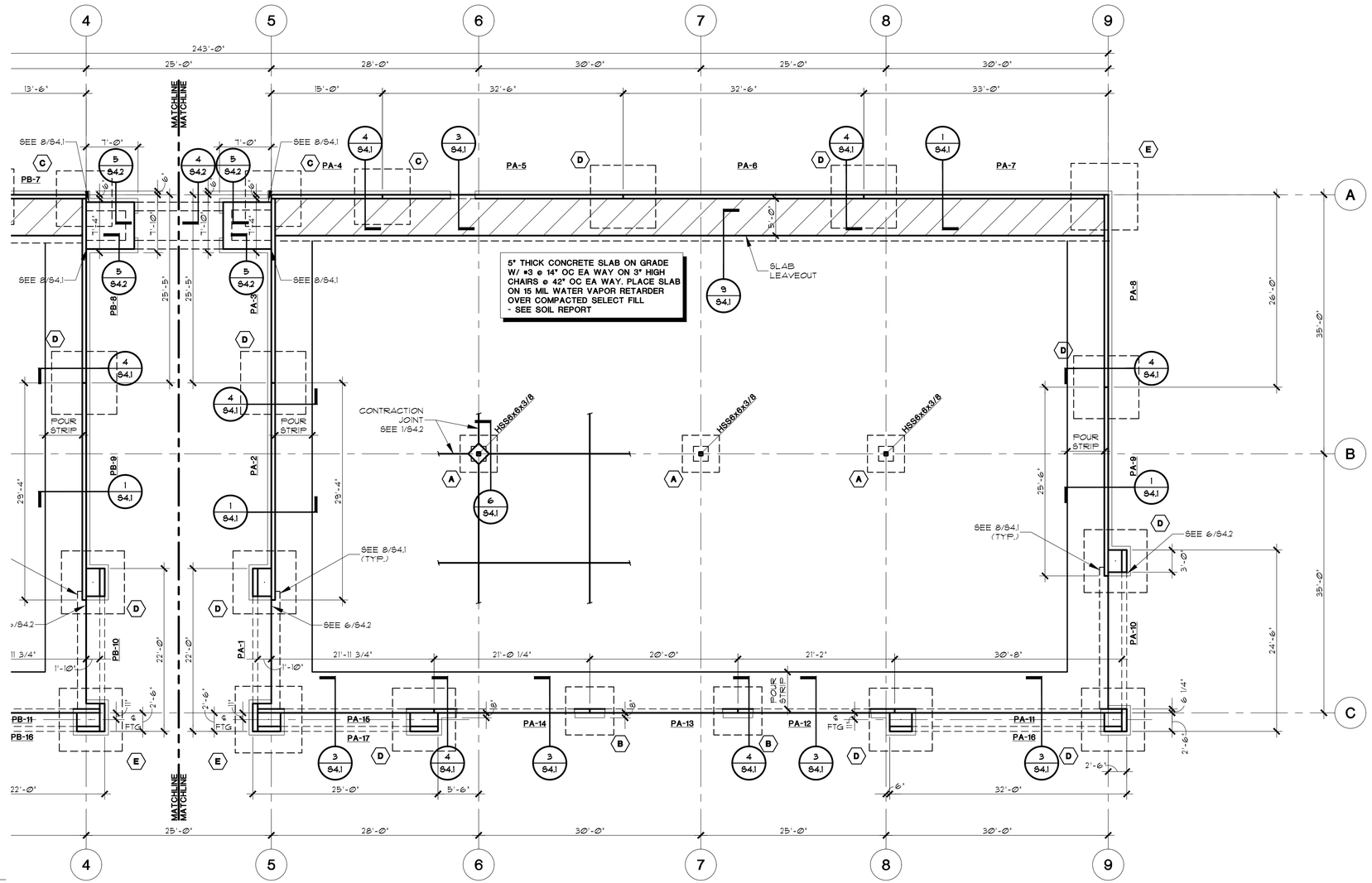
GENERAL NOTES

Sheet No. S0.1

2181072

DUMPSTER PAD FOUNDATION PLAN

SCALE: 1/8"=1'-0"

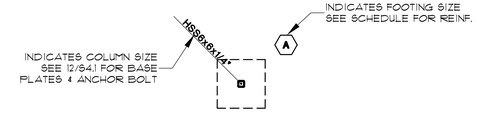


BUILDING A FOUNDATION PLAN

SCALE: 1/8"=1'-0"

SPREAD FOOTING SCHEDULE

MARK	LENGTH 'A'	WIDTH 'B'	THICK. 'T'	REINFORCEMENT		REMARKS
				LONG WAY	SHORT WAY	
A	5'-0"	5'-0"	1'-2"	(6) - #6	(6) - #6	
B	6'-6"	6'-6"	1'-6"	(7) - #7	(7) - #7	
C	7'-6"	7'-6"	1'-6"	(8) - #8	(8) - #8	
D	8'-6"	8'-6"	1'-10"	(9) - #8	(9) - #8	
E	9'-0"	9'-0"	1'-10"	(9) - #8	(9) - #8	



LEGEND

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BUILDING A FOUNDATION PLAN

Sheet No. S1.1

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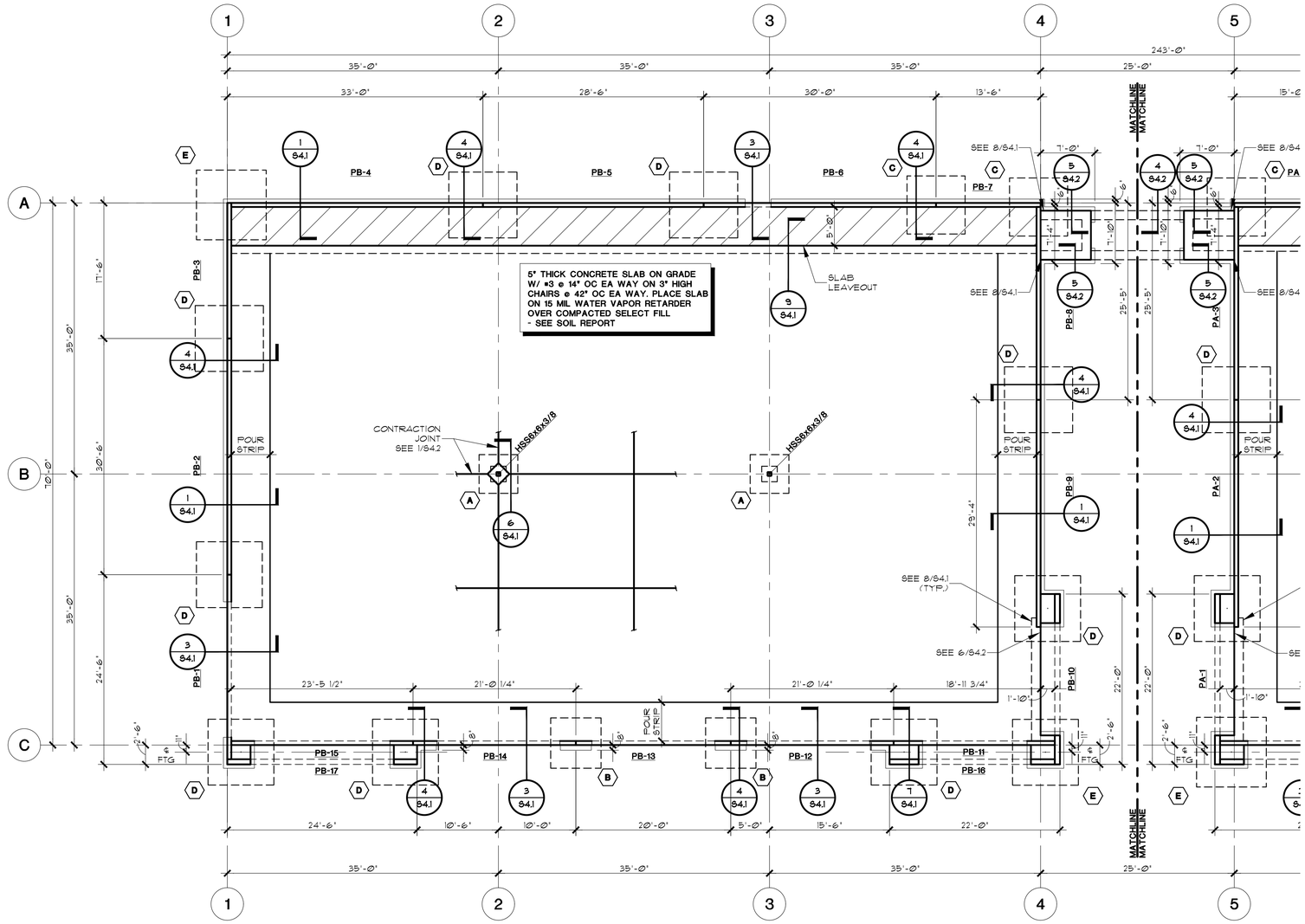


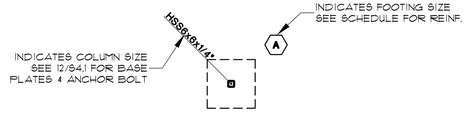
SPREAD FOOTING SCHEDULE

MARK	LENGTH 'A'	WIDTH 'B'	THICK. 'T'	REINFORCEMENT		REMARKS
				LONG WAY	SHORT WAY	
A	5'-0"	5'-0"	1'-2"	(6) - #6	(6) - #6	
B	6'-6"	6'-6"	1'-6"	(7) - #7	(7) - #7	
C	7'-6"	7'-6"	1'-6"	(8) - #8	(8) - #8	
D	8'-6"	8'-6"	1'-10"	(9) - #8	(9) - #8	
E	9'-0"	9'-0"	1'-10"	(9) - #8	(9) - #8	

NORTH

BUILDING B FOUNDATION PLAN

SCALE: 1/8"-1'-0"



LEGEND

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BUILDING B FOUNDATION PLAN

Sheet No. S1.2

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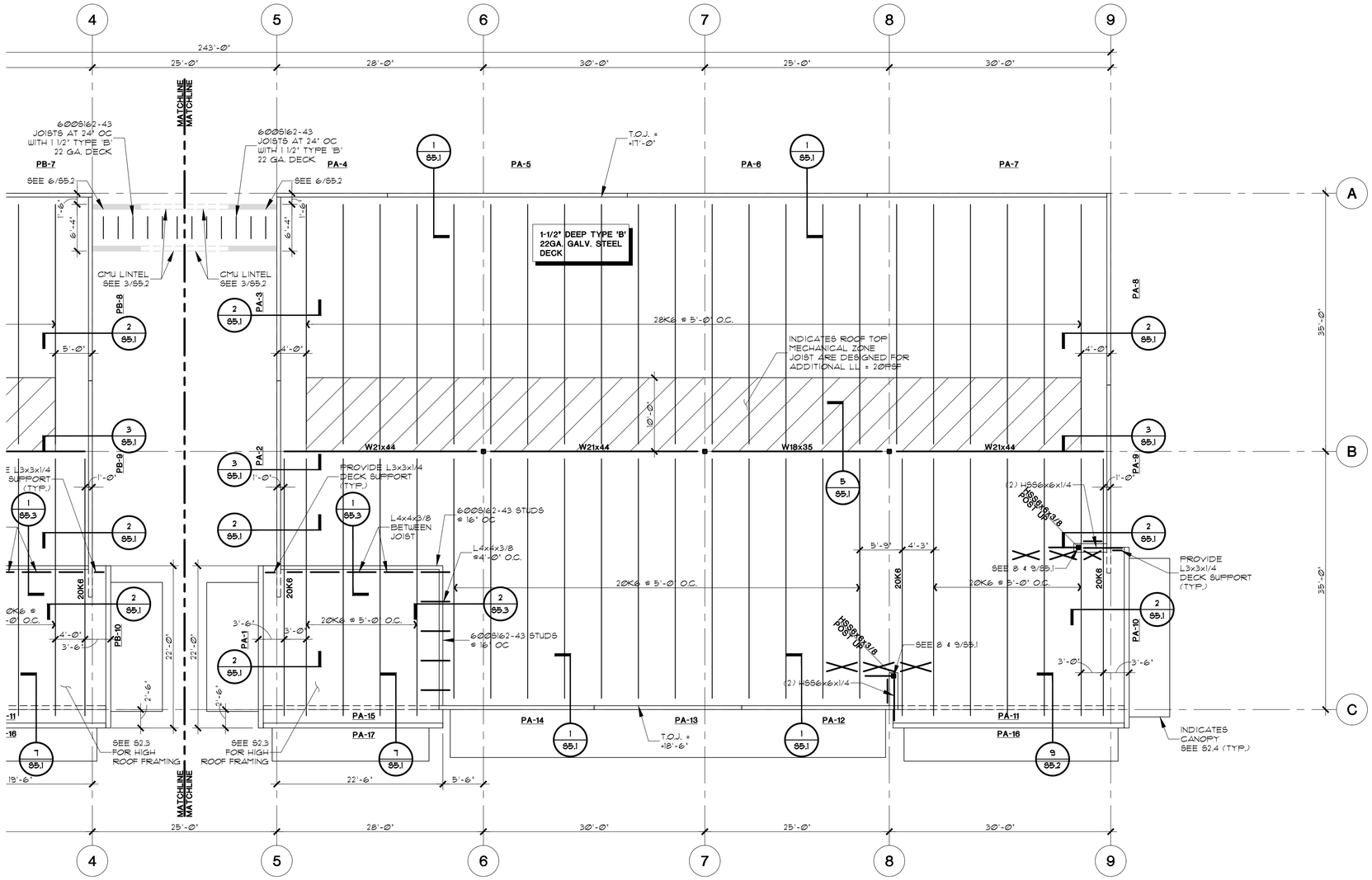

NORTH

BUILDING A ROOF FRAMING PLAN

SCALE: 1/8"=1'-0"

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BUILDING A
ROOF FRAMING PLAN

Sheet No. S2.1

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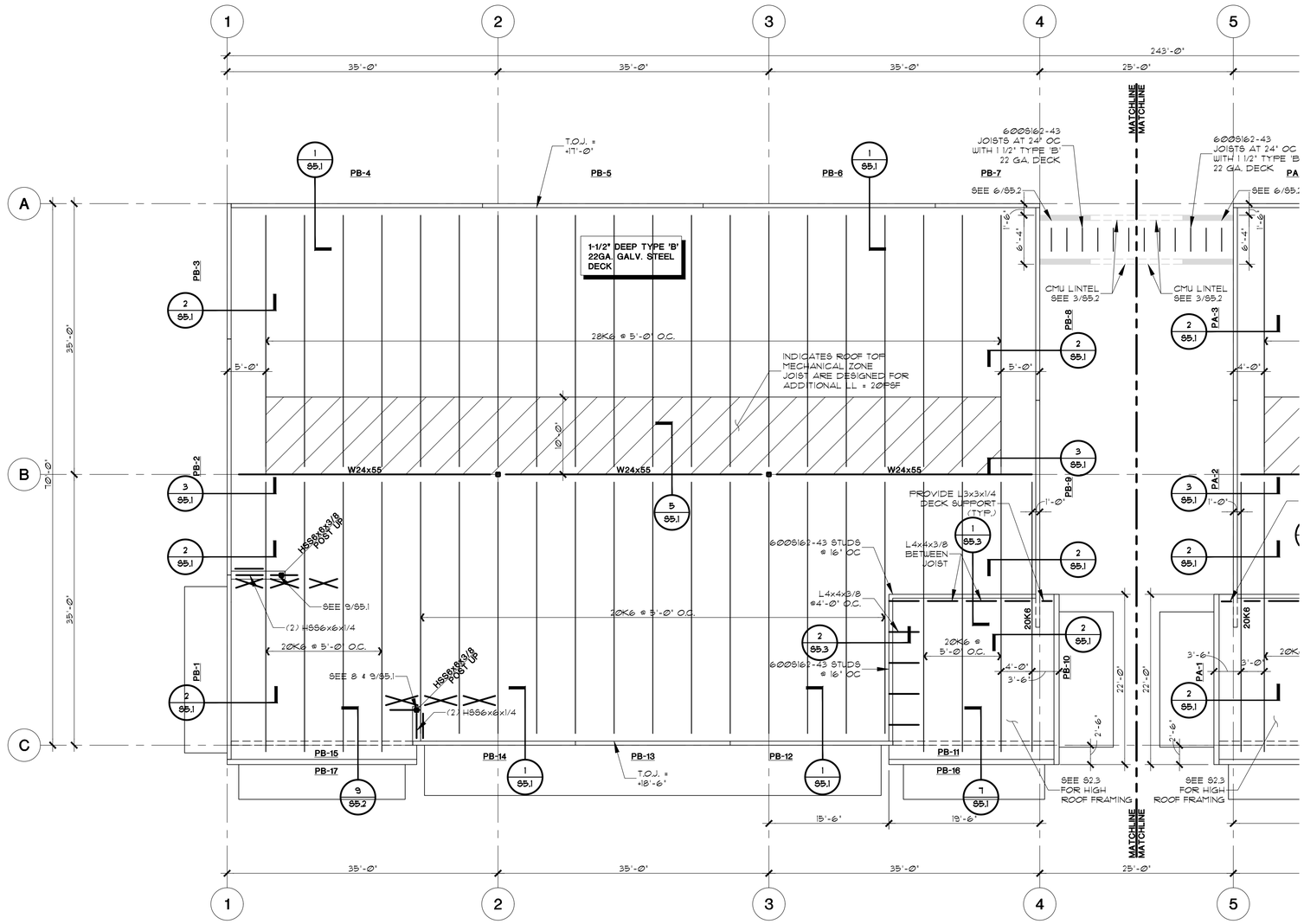

NORTH

BUILDING B ROOF FRAMING PLAN

SCALE: 1/8"=1'-0"

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BUILDING B
ROOF FRAMING PLAN

Sheet No. S2.2

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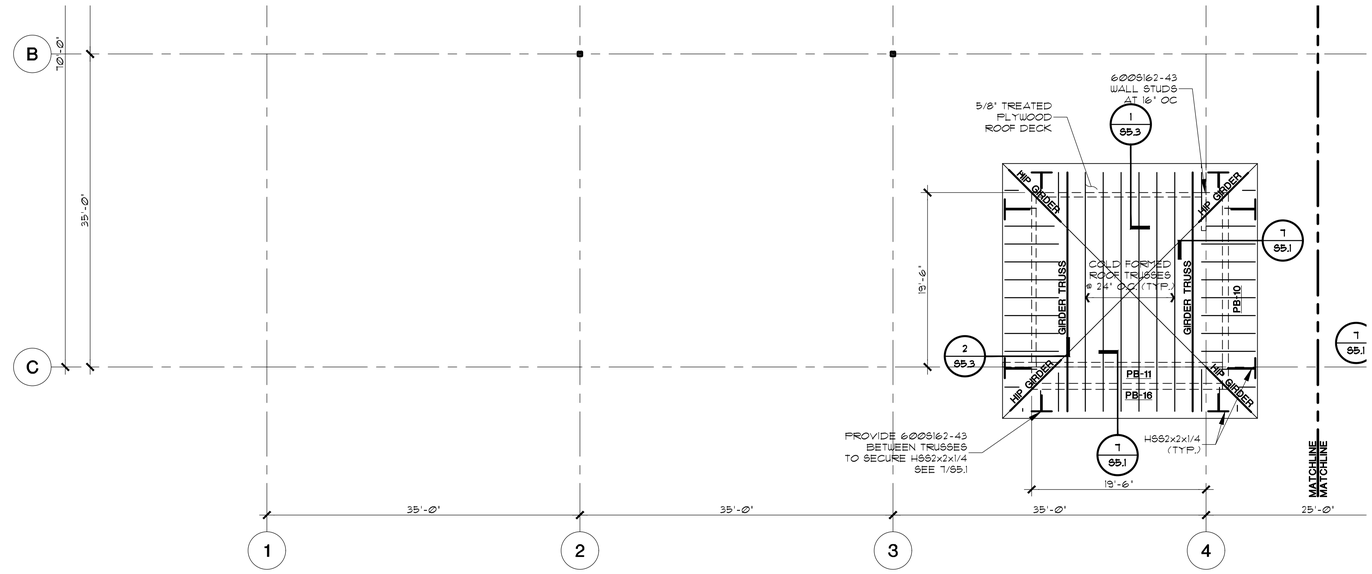
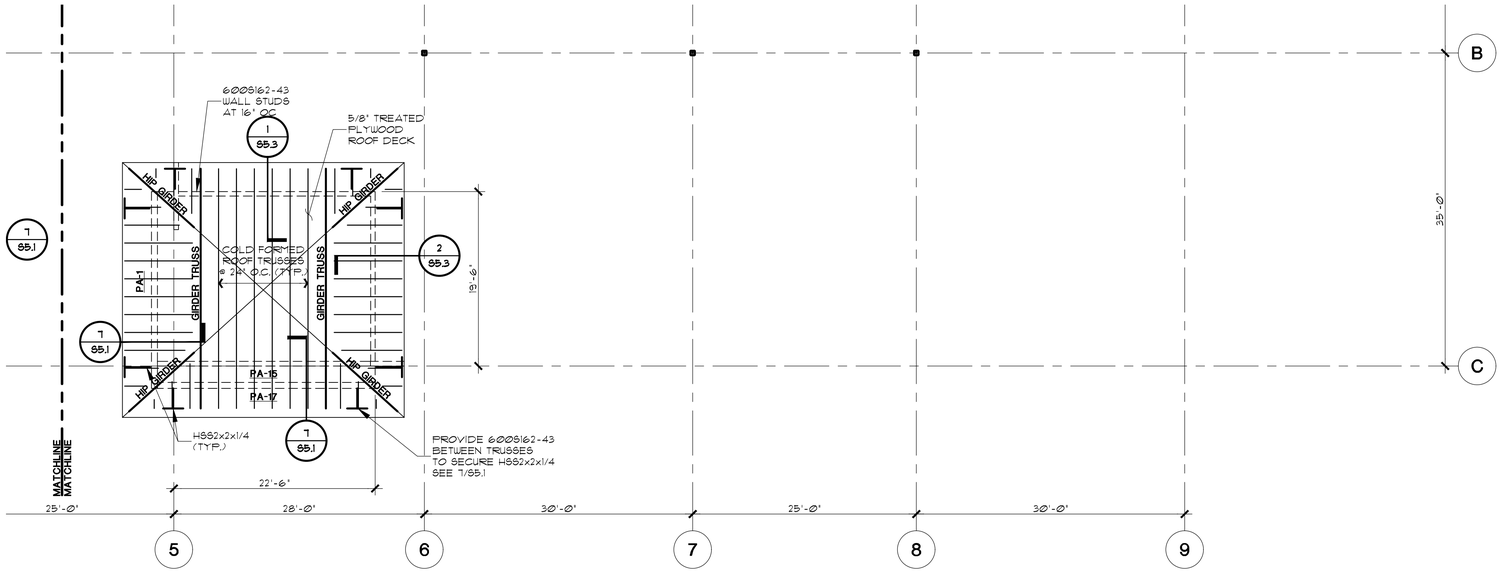


BUILDING B HIGH ROOF FRAMING PLAN

SCALE: 1/8"=1'-0"



BUILDING A HIGH ROOF FRAMING PLAN

SCALE: 1/8"=1'-0"

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HIGH ROOF FRAMING PLAN

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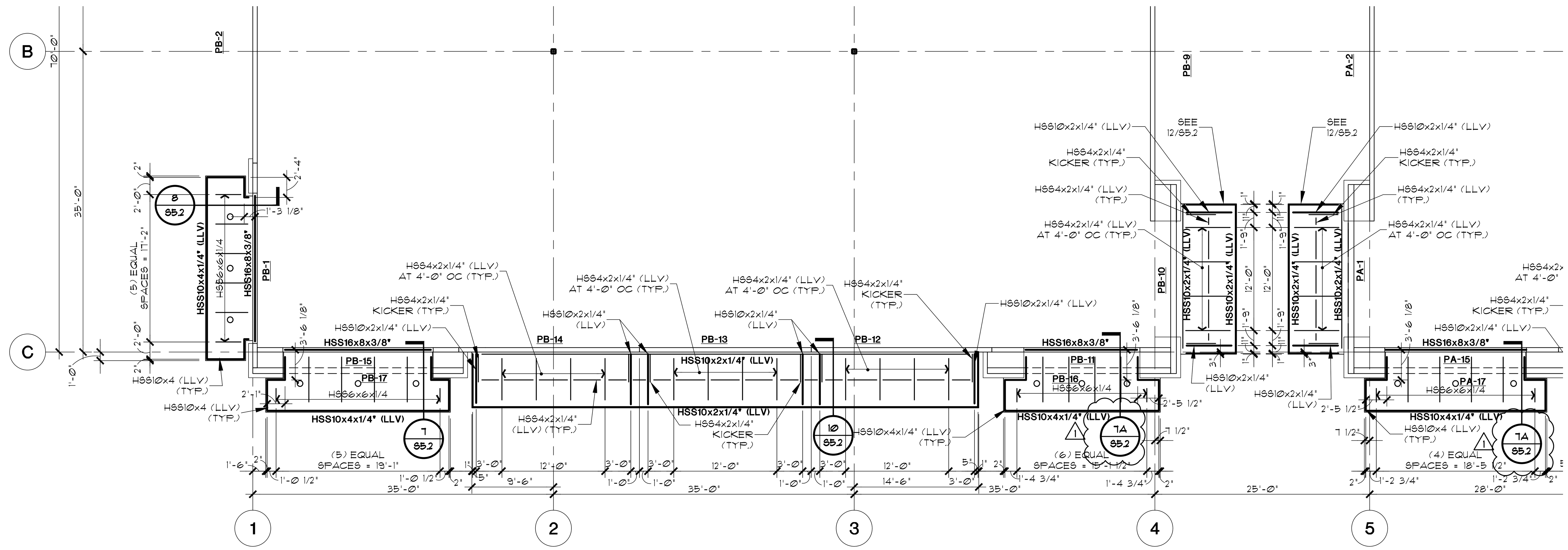
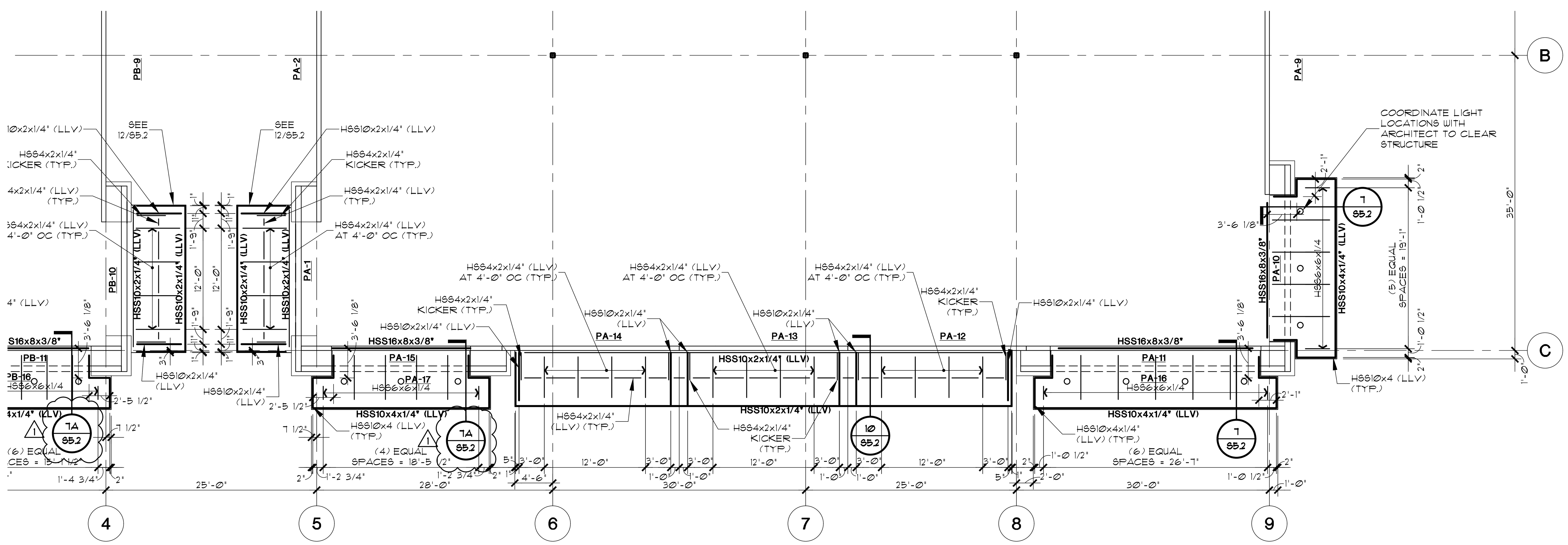


BUILDING B
CANOPY FRAMING PLAN

SCALE: 1/8"=1'-0"



BUILDING A
CANOPY FRAMING PLAN

SCALE: 1/8"=1'-0"

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CANOPY FRAMING PLAN

Sheet No. S2.4

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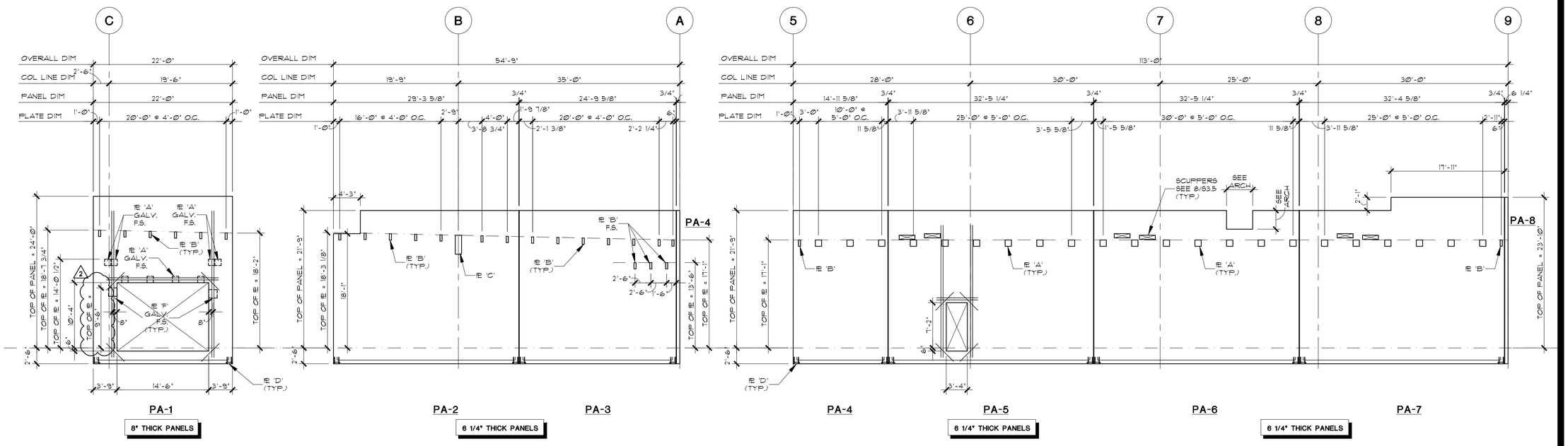
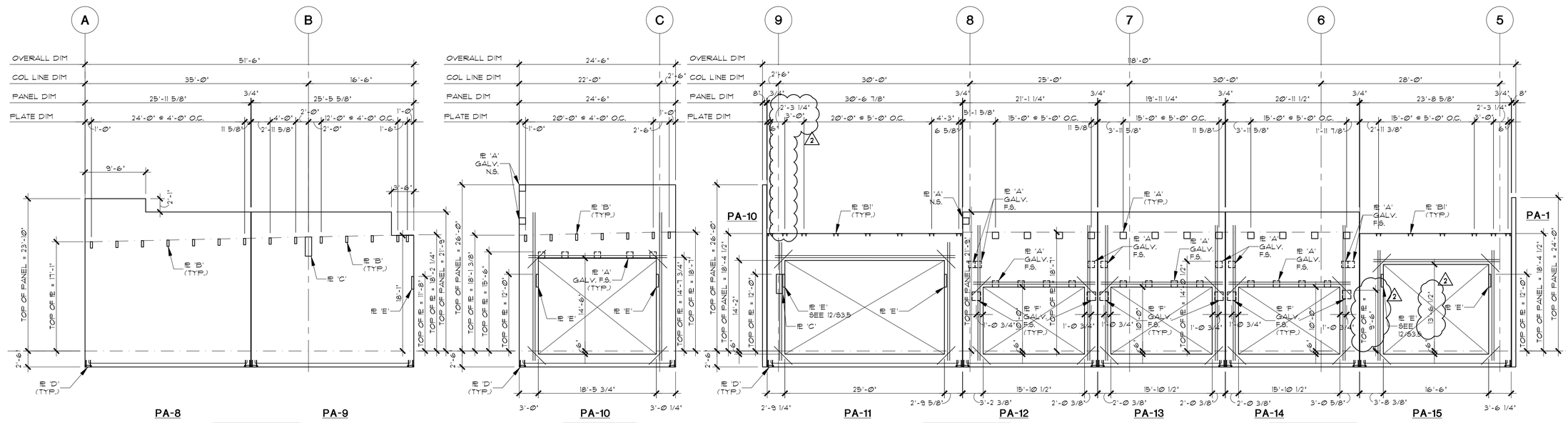


BUILDING A PANEL ELEVATIONS

SCALE: 1/8"=1'-0"

COORDINATE EMBED PLATE LOCATIONS AND CANOPY MEMBERS WITH ARCHITECT CANOPY LIGHTS TO CLEAR STRUCTURE



BUILDING A PANEL ELEVATIONS

SCALE: 1/8"=1'-0"

COORDINATE ALL OPENING, SIZES & LOCATIONS PRIOR TO POURING PANELS. SEE ARCH DRAWINGS FOR REVEALS, CHAMFERS, ETC.

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BUILDING A PANEL ELEVATIONS

Sheet No. S3.1

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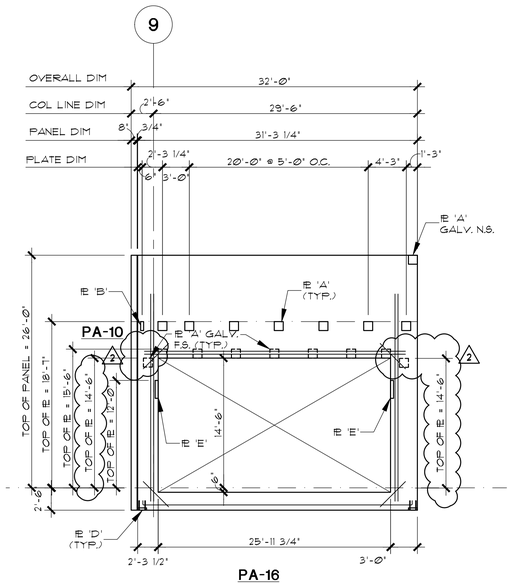

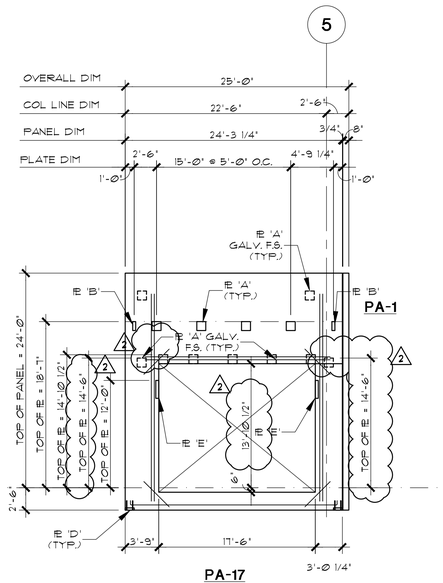

BUILDING A PANEL ELEVATIONS

SCALE: 1/8"=1'-0"

COORDINATE EMBED PLATE LOCATIONS AND CANOPY MEMBERS WITH ARCHITECT CANOPY LIGHTS TO CLEAR STRUCTURE

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BUILDING A PANEL ELEVATIONS

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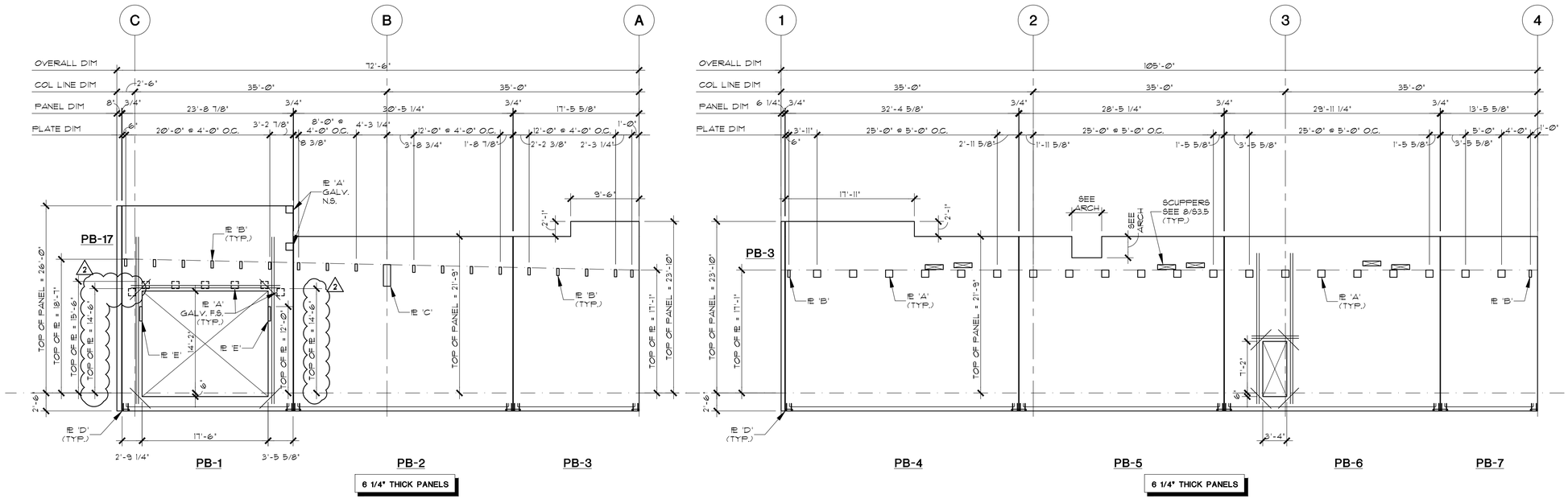
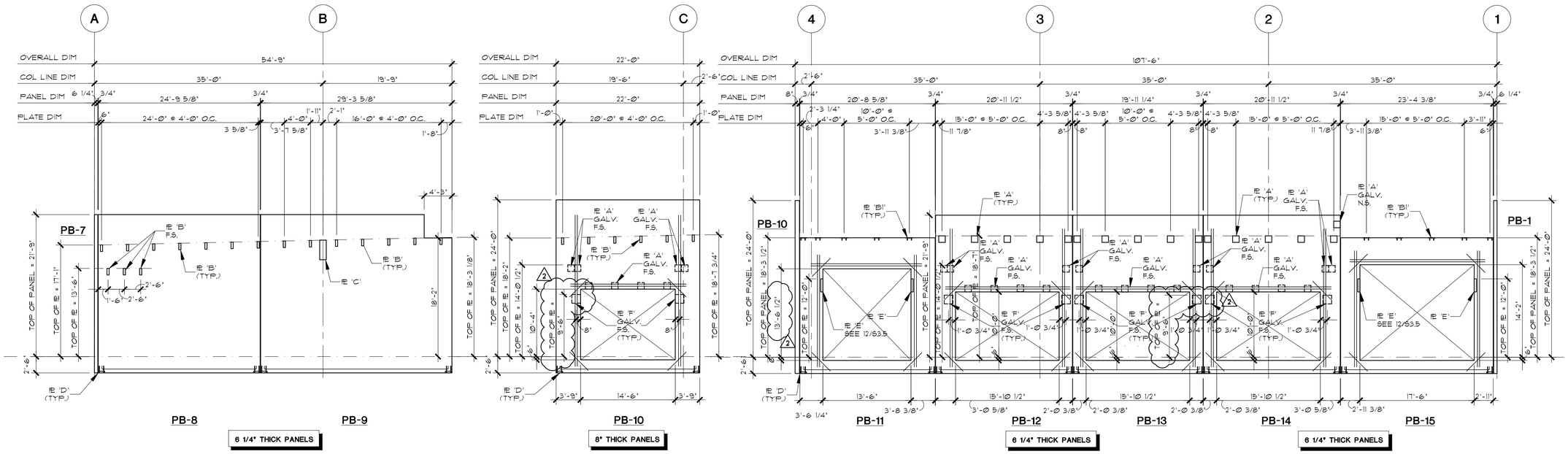


BUILDING B PANEL ELEVATIONS

SCALE: 1/8"=1'-0"

COORDINATE EMBED PLATE LOCATIONS AND CANOPY MEMBERS WITH ARCHITECT CANOPY LIGHTS TO CLEAR STRUCTURE



BUILDING B PANEL ELEVATIONS

SCALE: 1/8"=1'-0"

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BUILDING B
PANEL ELEVATIONS

Sheet No. S3.3

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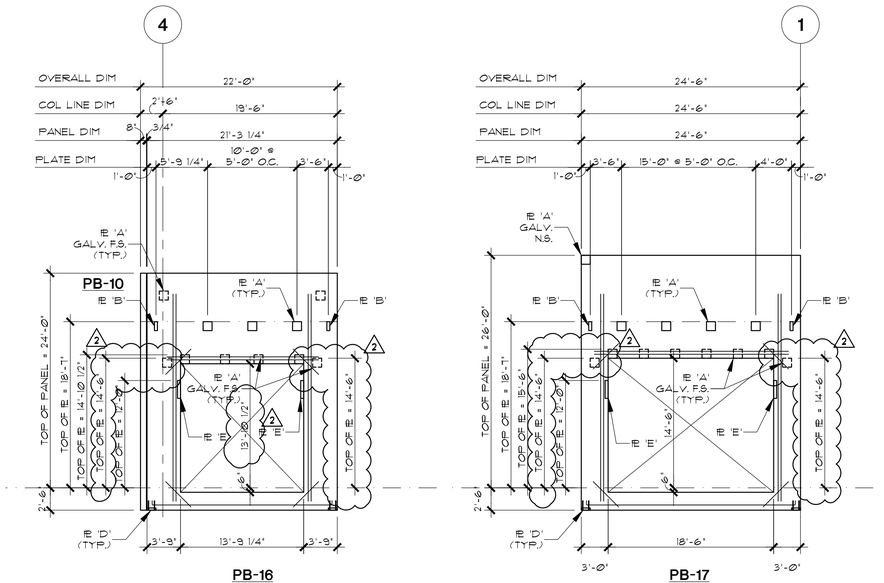

BUILDING B
PANEL ELEVATIONS

SCALE: 1/8"=1'-0"

COORDINATE EMBED PLATE LOCATIONS AND CANOPY MEMBERS WITH ARCHITECT
CANOPY LIGHTS TO CLEAR STRUCTURE

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BUILDING B
PANEL ELEVATIONS

Sheet No. S3.4

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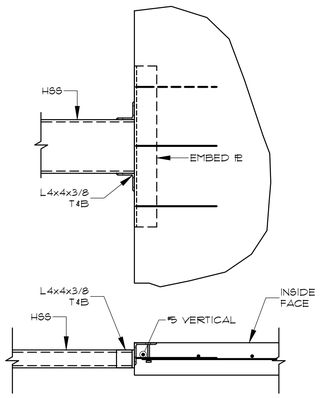
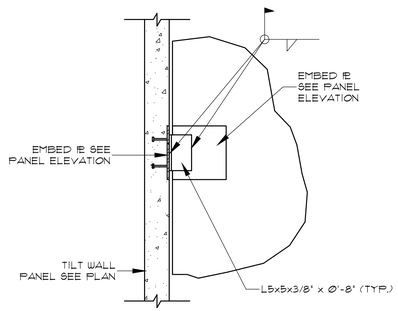


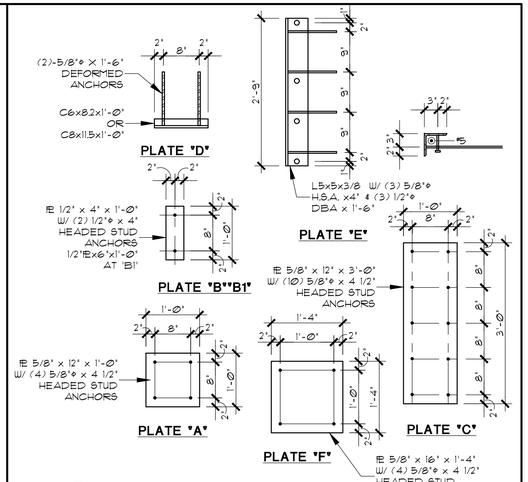
PLAN VIEW

12 DETAIL
SCALE:3/4" = 1'-0"

9 DETAIL
SCALE:3/4" = 1'-0"

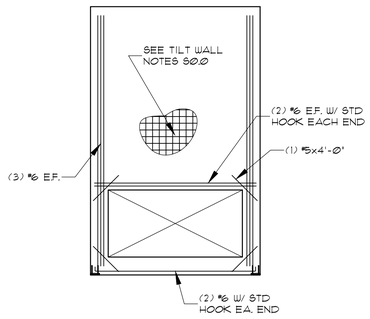


6 JUMPER CONNECTION
SCALE:3/4" = 1'-0"

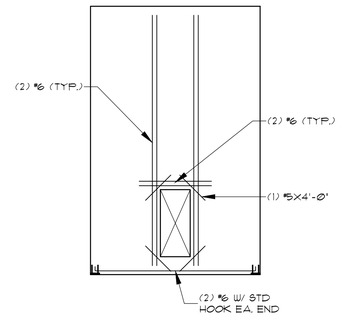


3 EMBED PLATES
SCALE:3/4" = 1'-0"

COORDINATE ALL OPENING, SIZES & LOCATIONS PRIOR TO POURING PANELS. SEE ARCH DRAWINGS FOR REVEALS, CHAMFERS, ETC.



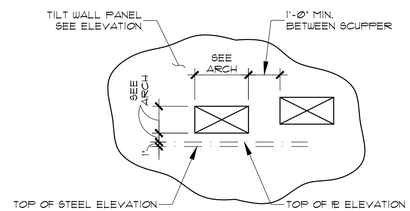
OPENINGS GREATER THAN 8'-0"



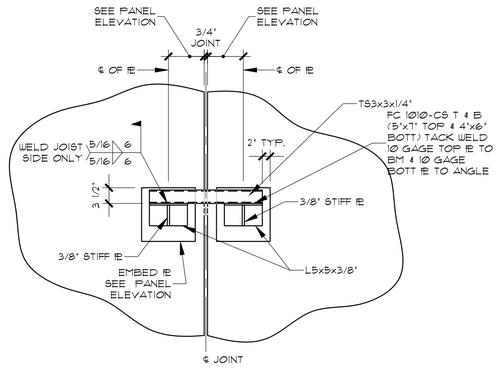
OPENINGS LESS THAN 8'-0"

11 TYPICAL PANEL REINFORCING
SCALE:1/8" = 1'-0"

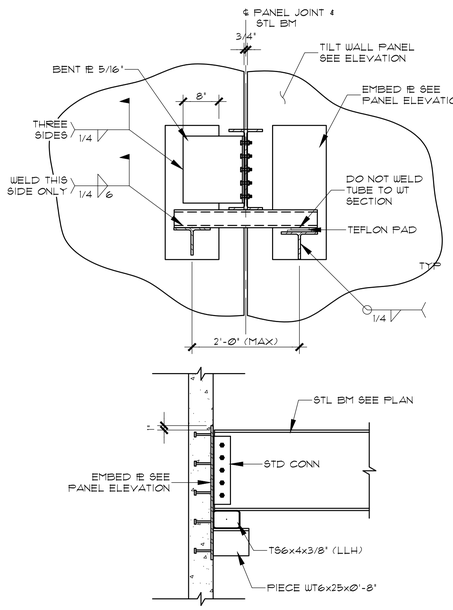
SEE PANEL ELEVATION FOR LOCATIONS



8 SCUPPER DETAIL
SCALE:3/4" = 1'-0"



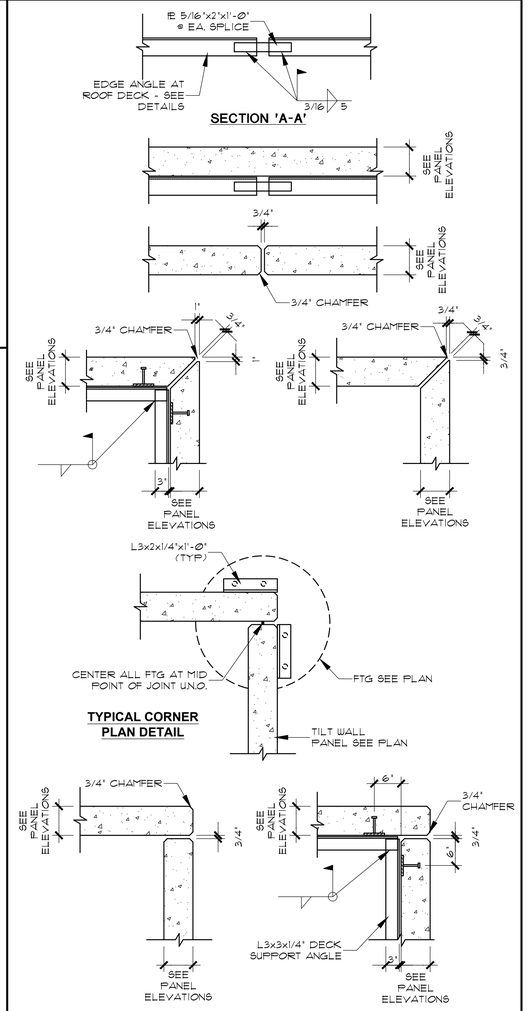
7 DETAIL AT JOIST AT PANEL JOINT
SCALE:3/4" = 1'-0"



SECTION "A"

4 BEAM BEARING AT PANEL JOINT
SCALE:NTS

5 DETAIL
SCALE:3/4" = 1'-0"



1 TYPICAL PANEL JOINTS
SCALE:3/4" = 1'-0"

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PANEL DETAILS

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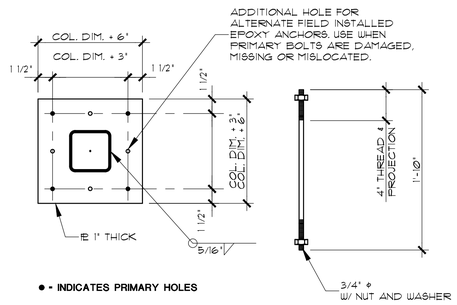
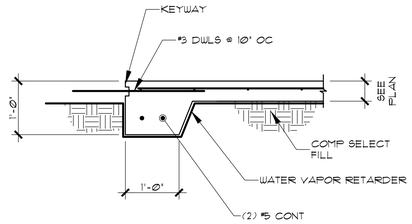


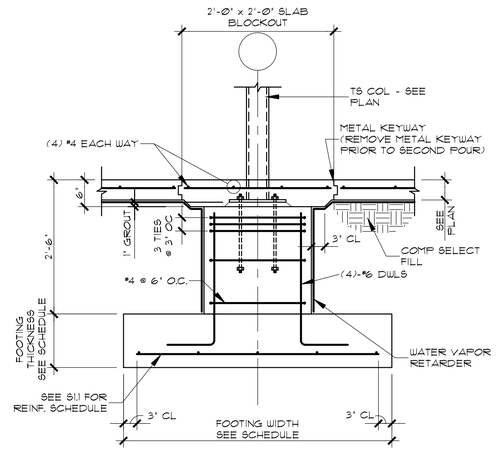
12 TYPICAL TUBE COLUMN BASE PLATE DETAIL

SCALE:NTS



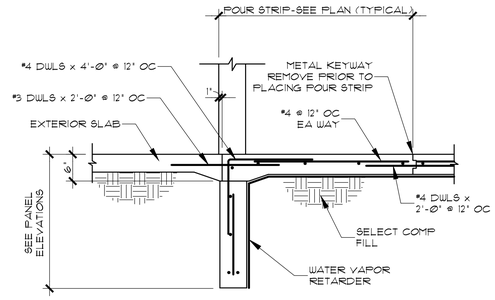
9 SLAB LEAVE OUT DETAIL

SCALE:3/4" = 1'-0"



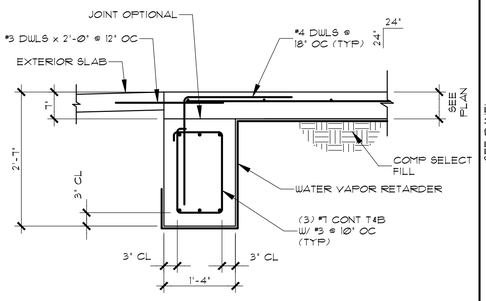
6 INTERIOR COLUMN DETAIL

SCALE:3/4" = 1'-0"



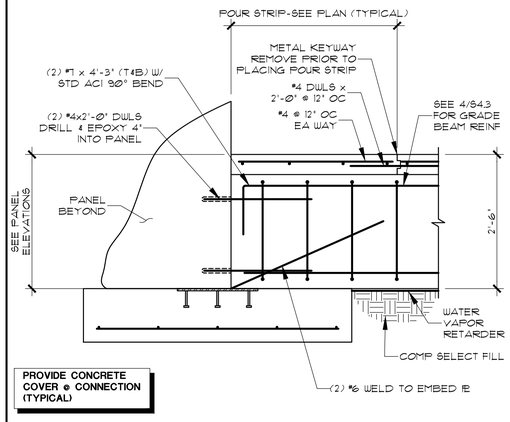
3 DETAIL AT OPENING

SCALE:3/4" = 1'-0"



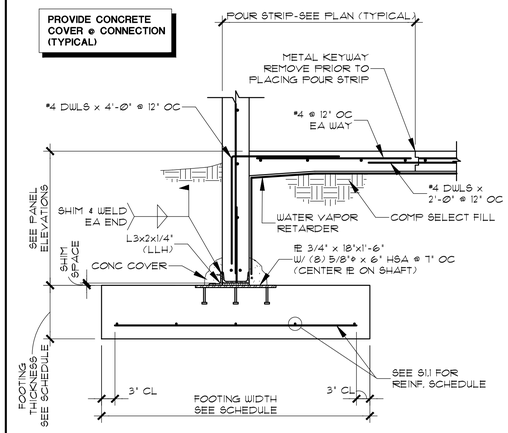
11 DETAIL @ DUMPSTER PAD

SCALE:3/4" = 1'-0"



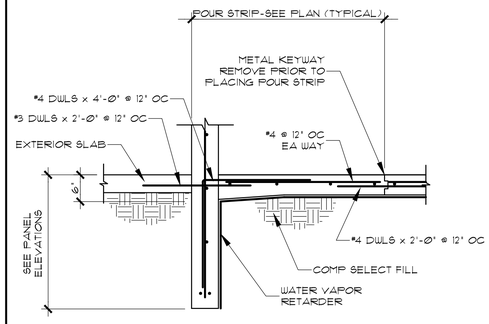
8 DETAIL

SCALE:3/4"-1'-0"



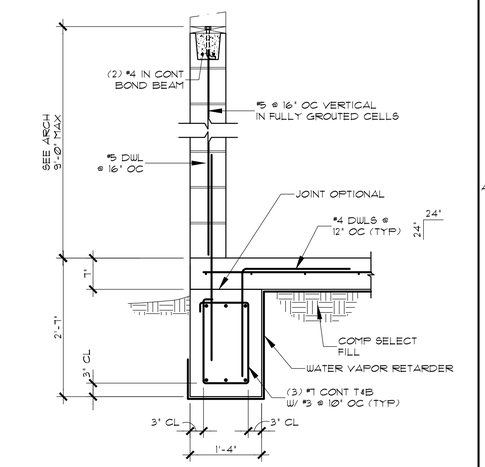
5 DETAIL AT PANEL BEARING

SCALE:3/4" = 1'-0"



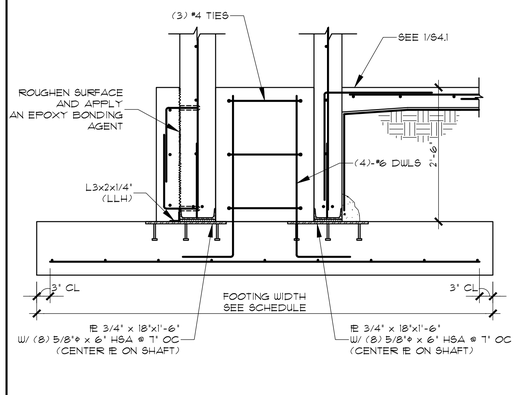
2 DETAIL AT PANEL

SCALE:3/4" = 1'-0"



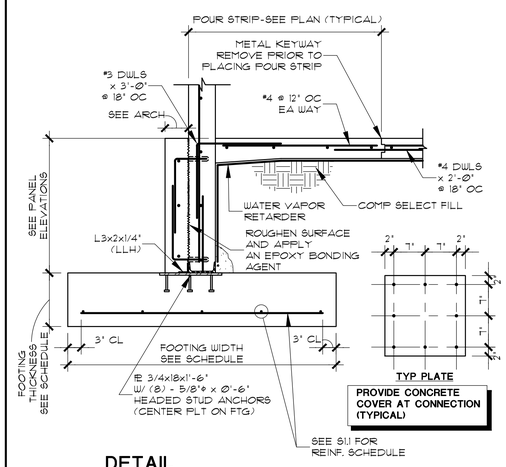
10 DUMPSTER PAD DETAIL

SCALE:3/4" = 1'-0"



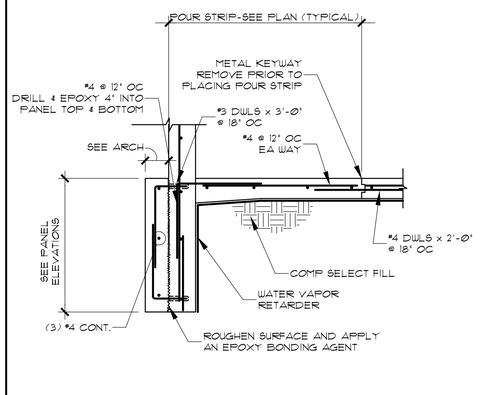
7 DETAIL

SCALE:3/4"-1'-0"



4 DETAIL @ PANEL BEARING

SCALE:3/4" = 1'-0"



1 DETAIL @ PANEL

SCALE:3/4" = 1'-0"

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FOUNDATION DETAILS

Sheet No. S4.1

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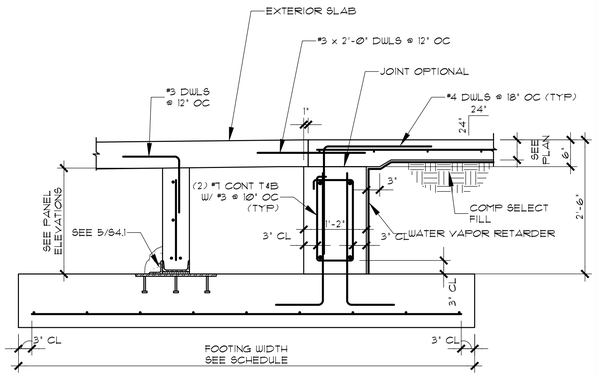
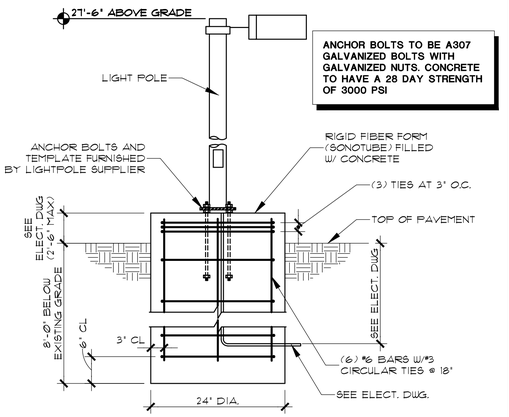
12 **DETAIL**
SCALE:3/4" = 1'-0"

9 **DETAIL**
SCALE:3/4" = 1'-0"



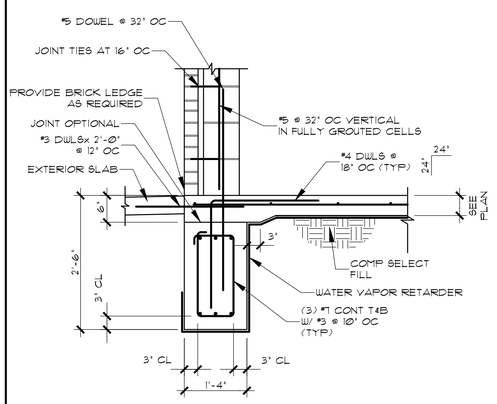
6 **DETAIL**
SCALE:3/4" = 1'-0"



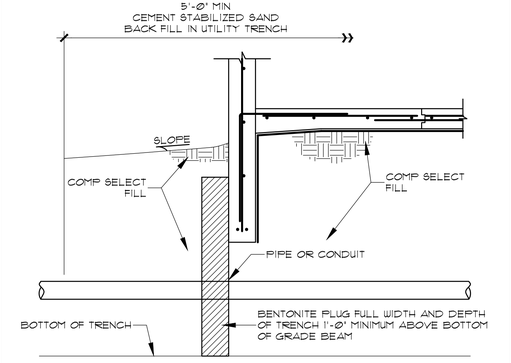
3 **LIGHTPOLE FOUNDATION DETAIL**
SCALE:3/4" = 1'-0"

11 **DETAIL**
SCALE:3/4" = 1'-0"

8 **DETAIL**
SCALE:3/4" = 1'-0"



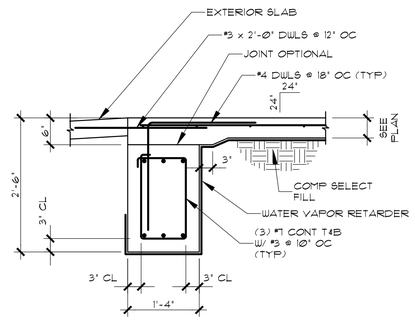
5 **EXTERIOR GRADE BEAM**
SCALE:3/4" = 1'-0"



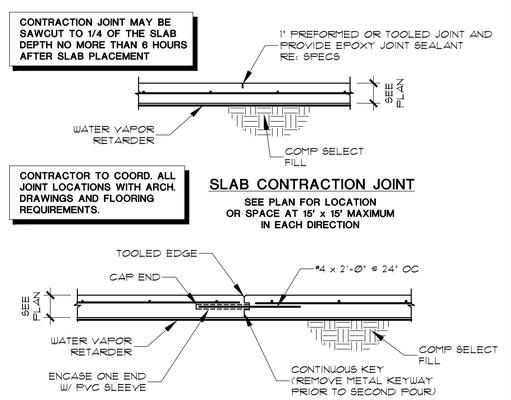
2 **PIPE ENTRY DETAIL**
SCALE:NTS

10 **DETAIL**
SCALE:3/4" = 1'-0"

7 **DETAIL**
SCALE:3/4" = 1'-0"



4 **GRADE BEAM AT EXTERIOR SLAB**
SCALE:3/4" = 1'-0"



1 **SLAB JOINT DETAIL**
SCALE:NTS

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FOUNDATION DETAILS

Sheet No. S4.2

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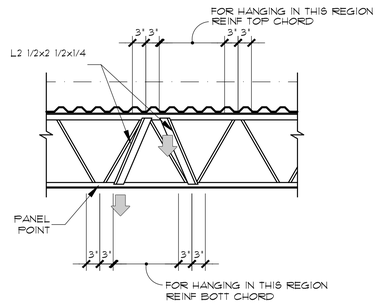
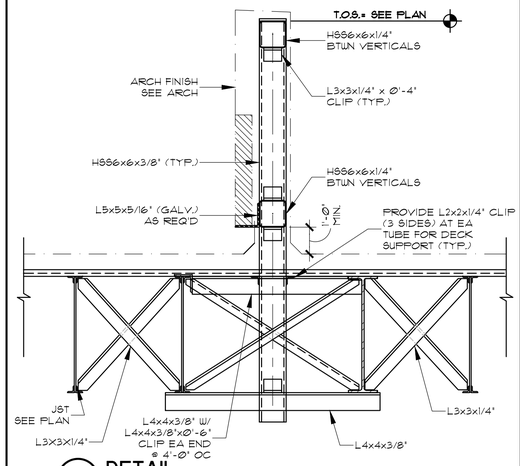
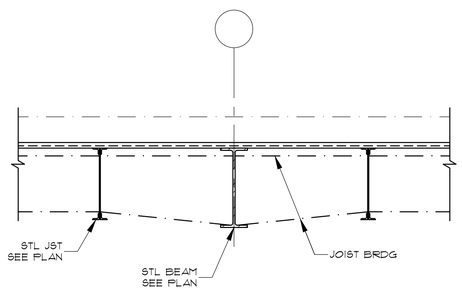


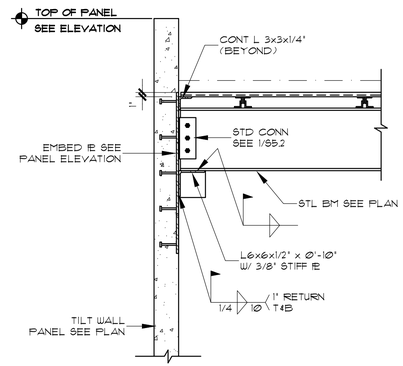
12 TYPICAL HANGING LOADS DETAIL
SCALE:3/4" = 1'-0"



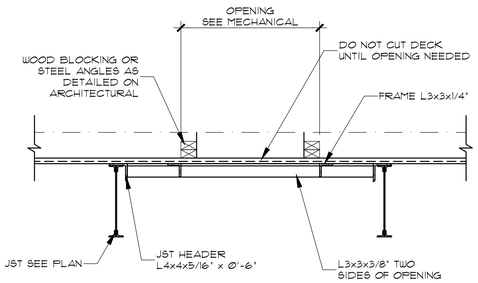
9 DETAIL
SCALE:3/4" = 1'-0"



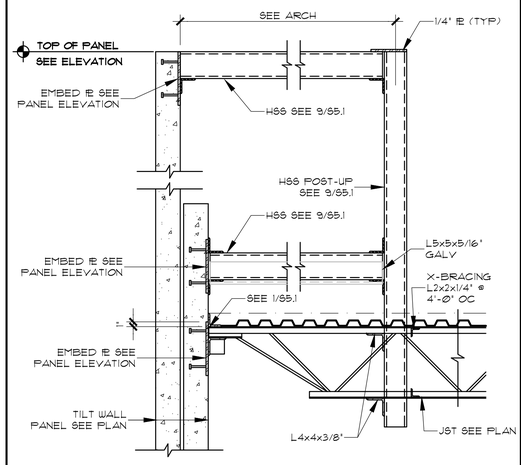
6 TYPICAL INTERIOR DETAIL
SCALE:3/4" = 1'-0"



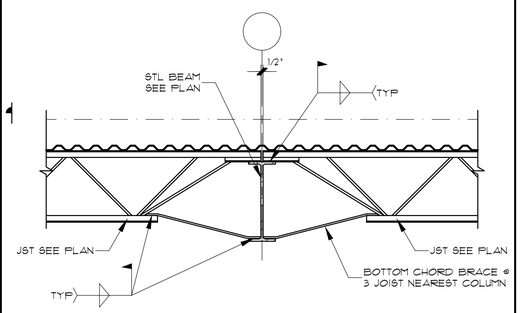
3 DETAIL AT GIRDER BEARING
SCALE:3/4" = 1'-0"



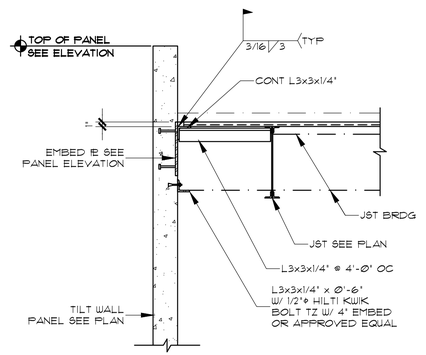
11 TYPICAL ROOF OPENING
SCALE:NTS



8 PARAPET RETURN DETAIL
SCALE:3/4" = 1'-0"



5 TYPICAL INTERIOR DETAIL
SCALE:3/4" = 1'-0"

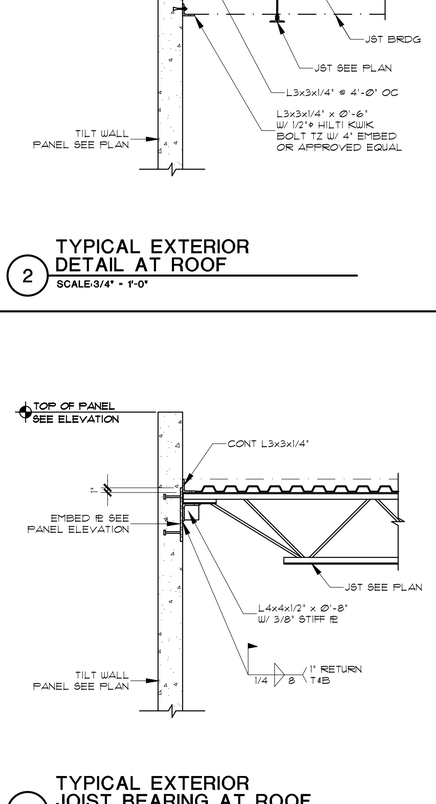


2 TYPICAL EXTERIOR DETAIL AT ROOF
SCALE:3/4" = 1'-0"

10 DETAIL
SCALE:3/4" = 1'-0"

7 DETAIL
SCALE:3/4" = 1'-0"

4 DETAIL AT BEAM BEARING
SCALE:3/4" = 1'-0"



1 TYPICAL EXTERIOR JOIST BEARING AT ROOF
SCALE:3/4" = 1'-0"

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FRAMING DETAILS

Sheet No. S5.1

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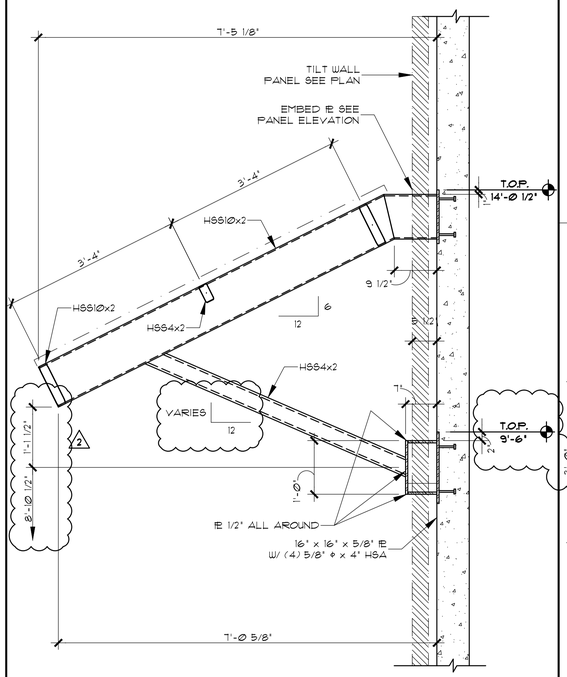
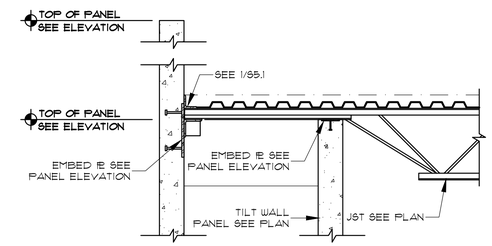
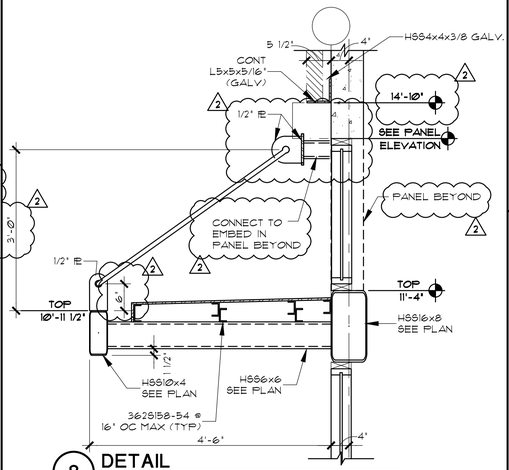


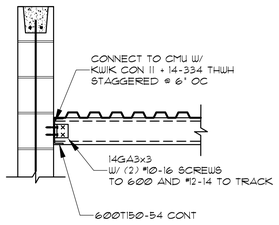
12 DETAIL
SCALE:3/4" = 1'-0"



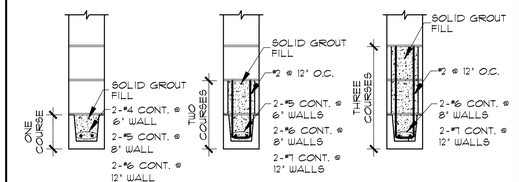
9 DETAIL
SCALE:3/4" = 1'-0"



8 DETAIL
SCALE:3/4" = 1'-0"



6 DETAIL
SCALE:3/4" = 1'-0"



OPENINGS LESS THAN 5'-0" | OPENINGS LESS THAN 10'-0" | OPENINGS LESS THAN 15'-0"

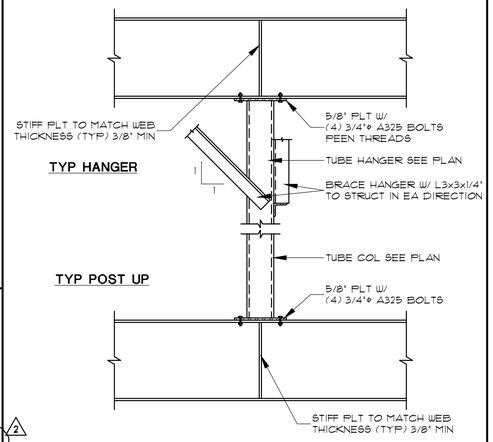
NOTE:

PROVIDE BLOCK LINTELS FOR ALL OPENINGS IN INTERIOR & EXTERIOR BLOCK WALLS FOR WHICH STEEL LINTELS ARE NOT SCHEDULED. SEE ARCHITECTURAL DRAWINGS FOR SIZE & LOCATION OF OPENINGS.

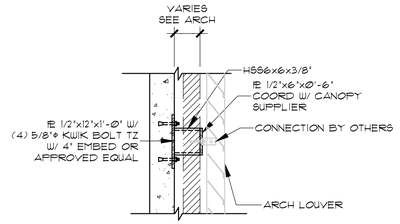
PROVIDE 8" MIN BEARING EACH END OF LINTEL.

PROVIDE (2) #5 VERTICALS IN FULLY GROUTED CELLS AT EACH JAMB.

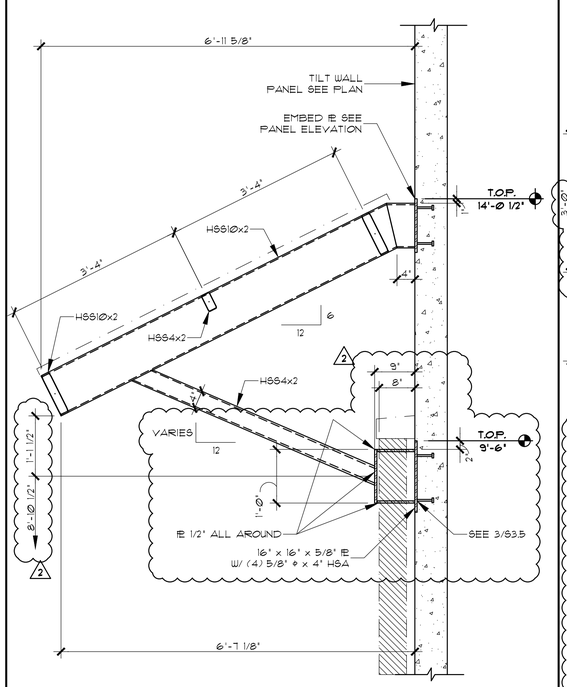
3 MASONRY LINTEL SCHEDULE
SCALE:NTS



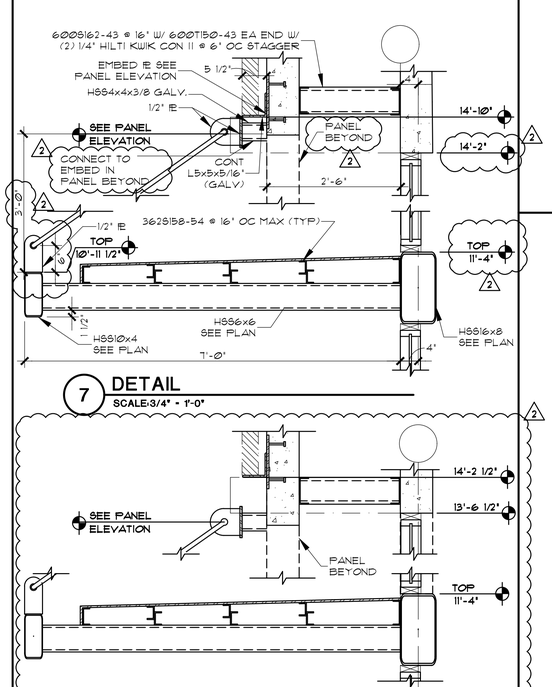
5 HANGER AND POST UP DETAIL
SCALE:NTS



2 DETAIL @ ARCH. LOUVER
SCALE:3/4" = 1'-0"



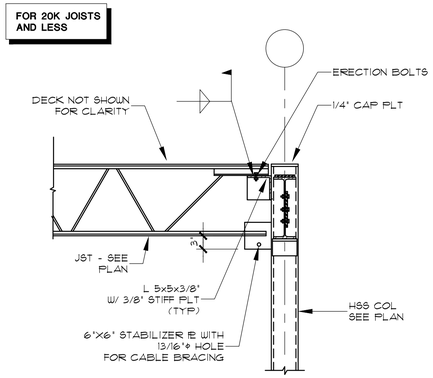
10 DETAIL
SCALE:3/4" = 1'-0"



7 DETAIL
SCALE:3/4" = 1'-0"

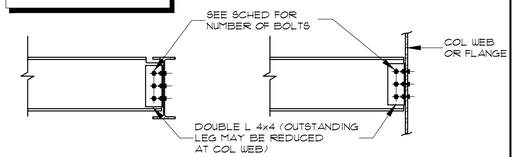
7A DETAIL
SCALE:3/4" = 1'-0"

FOR 20K JOISTS AND LESS



4 TYPICAL JOIST TO COLUMN CONNECTION DETAIL
SCALE:3/4" = 1'-0"

NOTE: PROVIDE TEMPORARY ERECTION SEAT ANGLE WITH 2 3/4" DIA. SEAT BOLTS AT DOUBLE CONNECTIONS TO WEB OR FLANGE.



BEAM DEPTH	ANGLE THICKNESS	NO. 3/4" DIA A325 BOLTS
8"	1/4"	2
10"	5/16"	2
12"	5/16"	3
14"	5/16"	3
16"	5/16"	4
18"	5/16"	5
21"	5/16"	6
24"	3/8"	6
27"	3/8"	7
30"	3/8"	8

1 BEAM TO BEAM/COLUMN CONNECTION TABLE
SCALE:NTS

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STATE OF TEXAS
BRITT GARDNER
90958
LICENSED PROFESSIONAL ENGINEER
09/26/2019

SHELL BUILDING & SITE WORK DEVELOPMENT

720/722 US 79 WEST TOWNWEST COMMONS
HUTTO, TX 78634

Project No.	18064
Drawn	FP
Checked	BG

FRAMING DETAILS

Sheet No. S5.2

2181072

12 DETAIL
SCALE:3/4" = 1'-0"

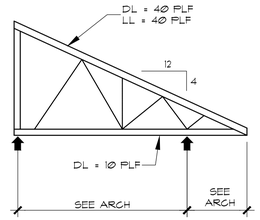
9 DETAIL
SCALE:3/4" = 1'-0"

6 DETAIL
SCALE:3/4" = 1'-0"

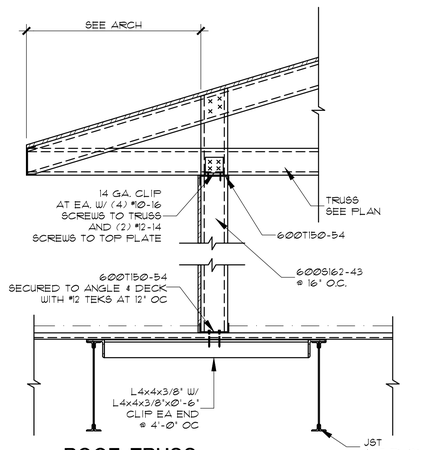
3 DETAIL
SCALE:3/4" = 1'-0"

11 DETAIL
SCALE:3/4" = 1'-0"

8 DETAIL
SCALE:3/4" = 1'-0"



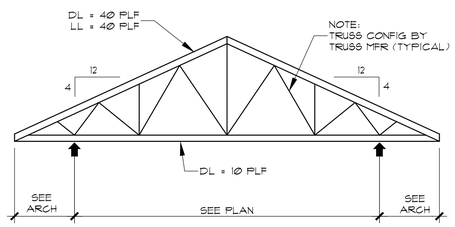
5 COLD FORMED ROOF TRUSS PROFILE RT-2
SCALE:3/16" = 1'-0"



2 ROOF TRUSS BEARING DETAIL
SCALE:NTS

10 DETAIL
SCALE:3/4" = 1'-0"

7 DETAIL
SCALE:3/4" = 1'-0"



4 COLD FORMED ROOF TRUSS PROFILE RT-1
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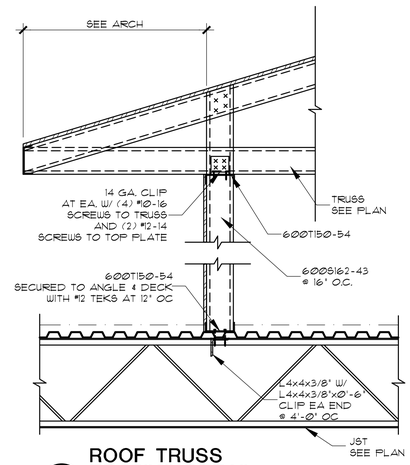

1 ROOF TRUSS BEARING DETAIL
SCALE:NTS

Date issued/revised

14 SEPT 2018 - FOR PERMIT AND REVIEW
14 NOV 2018 - FOR PRICING
15 MAR 2019 - FOR PERMIT
02 JULY 2019 - FOR CONSTRUCTION

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07/02/2019

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FRAMING DETAILS

Sheet No. S5.3

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