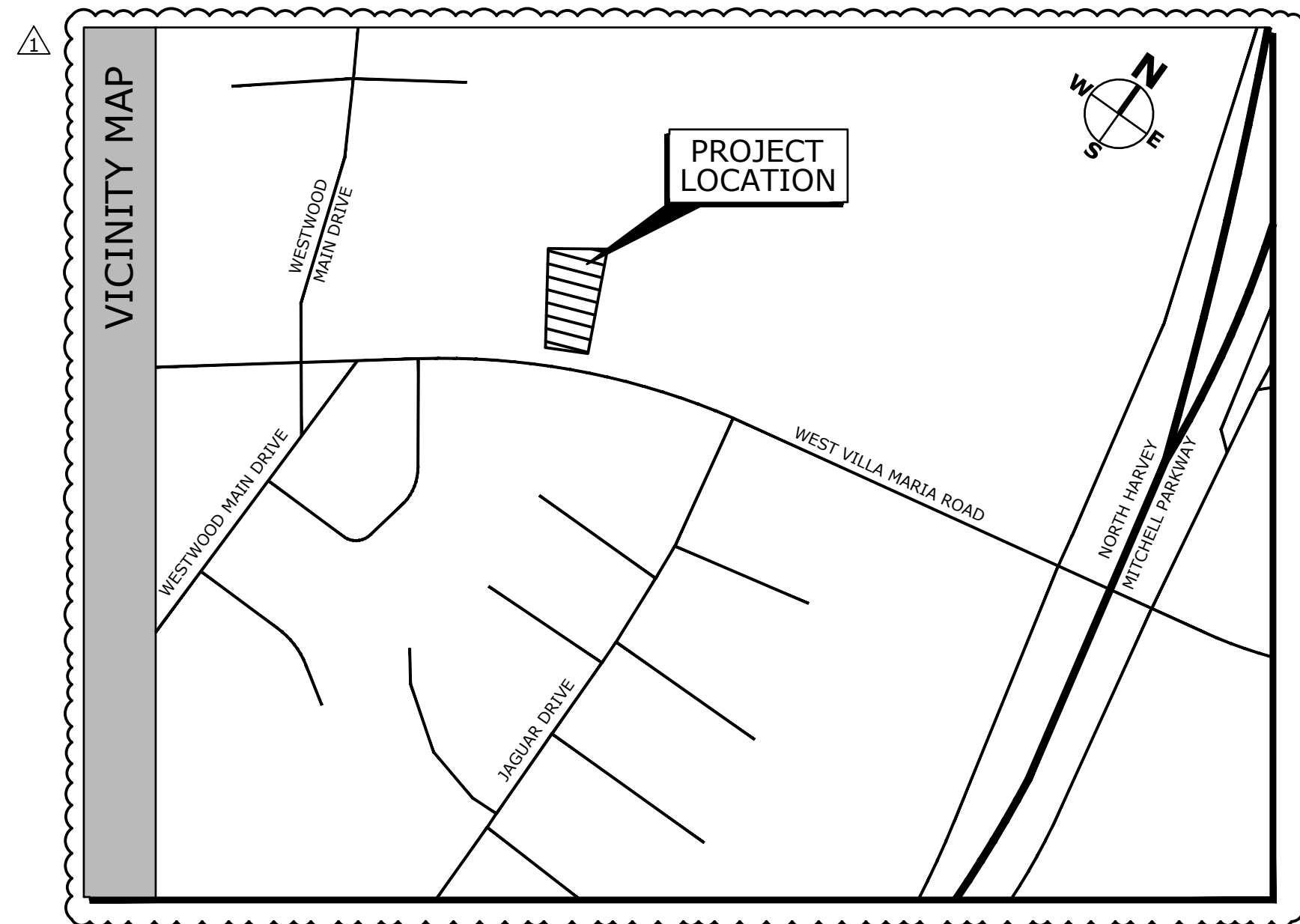


# SITE PLAN REVIEW FOR DUTCH BROS COFFEE

1642 WEST VILLA MARIA ROAD, BRYAN, TEXAS 77807



**DESIGN TEAM**

**OWNER:**  
MAIN & MAIN  
5750 Genesis Court, Suite 103  
Frisco, Texas 75034  
(214) 308-0008  
Attn: Sam Moore  
Attn: Craig Pincince

**Civil Engineer:**  
TECTONICS DESIGN GROUP  
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Reno, Nevada 89521  
(775) 824-9988  
Attn: Matt Rasmussen, P.E.

**Surveyor:**  
ALPHA INFRASTRUCTURE LLC  
4340 Decatur Drive, Suite 2114  
College Station, Texas 77845  
(979) 450-0062  
Attn: Jeff Barron

**Landscaping:**  
BELLE FIRMA  
4245 North Central Expy, Suite 501  
Dallas, Texas 75205  
(214) 865-7192  
Attn: Matt Taylor

**Electrical:**  
GARRISON ENGINEERING  
& CONSULTING  
Reno, Nevada  
(805) 540-0621  
Attn: Scott Garrison, P.E.

**Structural:**  
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730 Sandhill Road, Suite 250  
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(775) 473-9914  
Attn: Barrett Donovan, S.E.

**Signage Vendor:**  
ES&A SIGN & AWNING  
89975 Prairie Road  
Eugene, Oregon 97402  
(541) 485-5546

PROJECT INFORMATION	
JURISDICTION	CITY OF BRYAN, TEXAS
PROPERTY INFORMATION	
ZONING	PD - PLANNED DEVELOPMENT
PARCEL NUMBER	VOL. 2468, PG. 303, D.R.N.C.T.
BUILDING HEIGHT AND AREA	
AREA:	PROPOSED 950 SF.
HEIGHT:	PROPOSED 24 FT. 0 IN
MINIMUM SETBACK REQUIREMENTS	
FRONT	25 FT.
REAR	5 FT.
SIDES	5 FT.
PARKING SUMMARY	
BUILDING AREA:	950 SF
PARKING REQUIREMENT AT 1/100:	10 SPACES
STANDARD PARKING PROVIDED:	14 SPACES
TOTAL HANDICAP PARKING PROVIDED:	1 SPACE
TOTAL SPACES PROVIDED:	15 SPACES

**SURVEY INFO**

**BENCHMARKS**  
COORDINATES AND BEARINGS SHOWN HEREON ARE BASED UPON THE TEXAS STATE PLANE COORDINATE SYSTEM, NAD 83, (2011 ADJUSTED) CENTRAL ZONE. ALL DISTANCES AND COORDINATES SHOWN ARE SURFACE.  
8-IN NAIL W/ WASHER (SCALE ORIGIN)  
GRID COORDINATES SURFACE/GROUND COORDINATES  
N: 10215037.19 FT N: 10215037.19 FT GRID TO GROUND SCALE FACTOR: 1.00010871174254  
E: 3538991.79 FT E: 3538991.79 FT GROUND TO GRID SCALE FACTOR: 0.99989130007442

COORDINATES AND ELEVATIONS WERE ESTABLISHED USING THE SMARTNET NORTHAMERICA CONTROL NETWORK AND VERIFIED BY STATIC OBSERVATIONS PROCESSED USING OPUS. ELEVATIONS ARE NAVD 88 (GEOID 18). UNITS ARE U.S. SURVEY FEET ABBREVIATED (FT).

DRAWING INDEX	DRAWING		DESCRIPTION
	CIVIL	PS.1	PROJECT INFORMATION, DRAWING INDEX, VICINITY MAP, DESIGN TEAM
	C1.1	DEMOLITION PLAN	
	C2.1	SITE PLAN	
	C3.1	GRADING PLAN	
	C4.1	UTILITY PLAN	
	C5.1	BMP PLAN	
	EX2	EXISTING DRAINAGE MAP	
	EX3	DEVELOPED BASIN MAP	
LANDSCAPE	L1.01	LANDSCAPE PLAN	
	L1.02	LANDSCAPE SPECIFICATIONS AND DETAILS	
	L2.01	IRRIGATION PLAN	
	L2.02	IRRIGATION SPECIFICATIONS AND DETAILS	
ELECTRICAL	ES-0.1	SPECIFICATIONS	
	ES-1.0	ELECTRICAL SITE PLAN	
	ES-1.1	CANOPY LIGHTING PLAN	
	ES-2.0	PHOTOMETRIC SITE PLAN	

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DRAWN: D.J.M.  
DESIGNED: J.P.B.  
CHECKED/STAMPED: MATT K. RASMUSSEN, P.E.

STAMP:

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DESIGNER: FRM #22395

**Dutch Bros No.: TX0306**  
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**MAIN & MAIN CAPITAL GROUP, LLC**  
5750 Genesis Ct, Suite 103, Frisco, Texas 75034  
tel 214-308-0008

PROJECT/CLIENT: # 22122

DATE: 10/27/22 SUBMITTAL  
11/15/22 SITE PLAN REVIEW  
CITY COMMENTS

SUBMITTAL RECORD:

SHEET TITLE: PROJECT INFORMATION  
DRAWING INDEX  
VICINITY MAP  
DESIGN TEAM

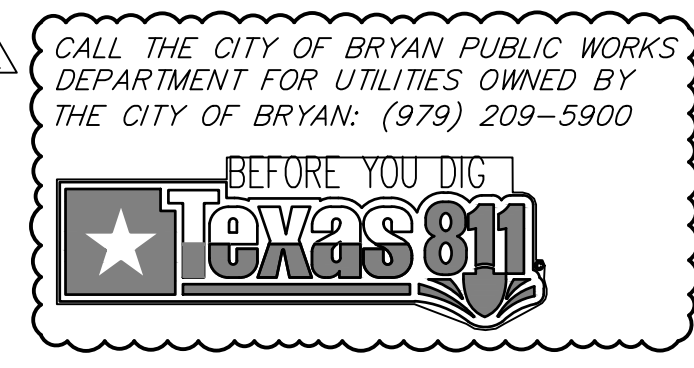
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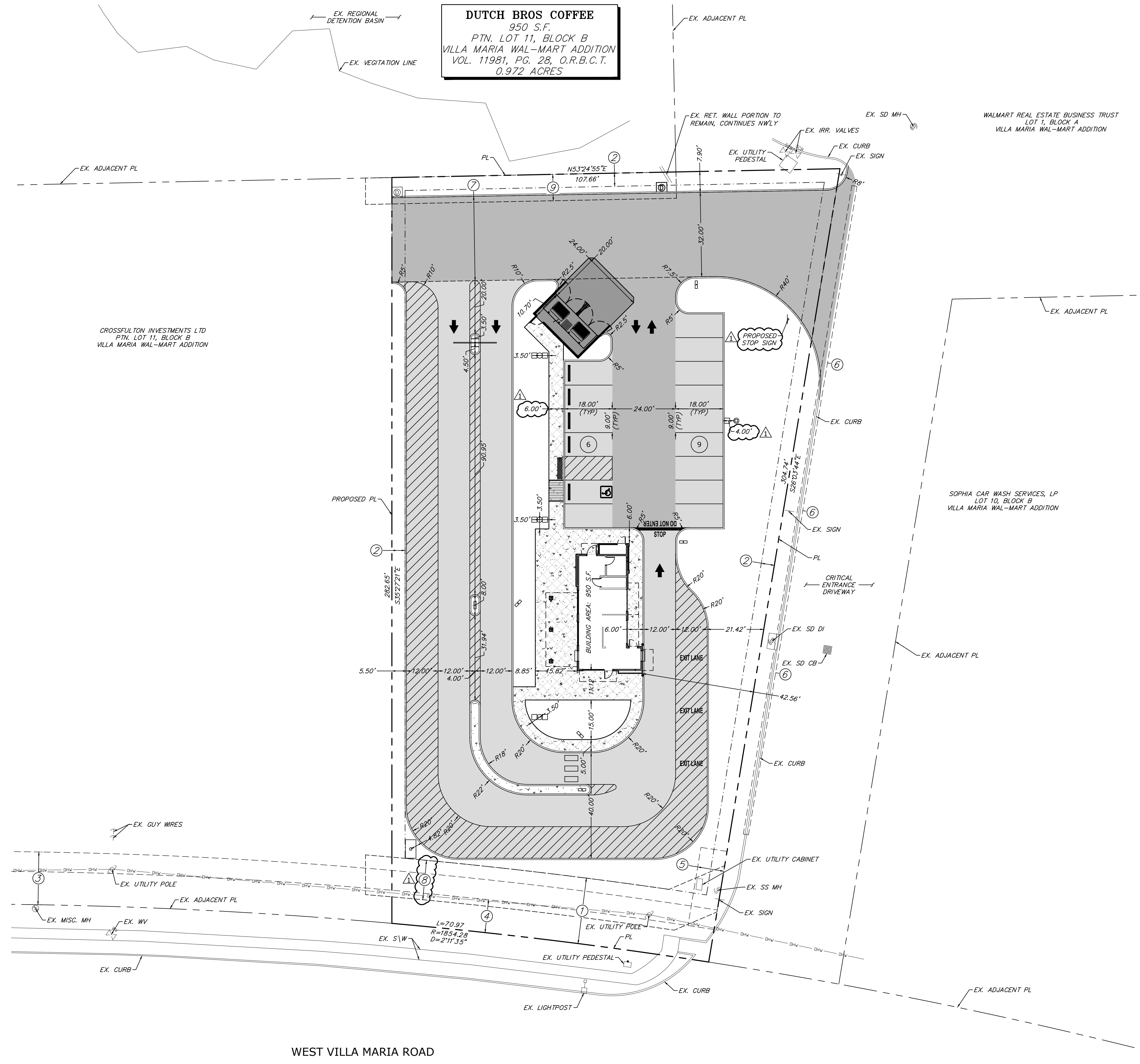




1"=20'-0" Dutch Bros TX0306 West Villa Maria Road, Bryan, TX 22122 C21



CALL THE CITY OF BRYAN PUBLIC WORKS DEPARTMENT FOR UTILITIES OWNED BY THE CITY OF BRYAN: (979) 209-5900



**DUTCH BROS COFFEE**  
 950 S.F.  
 PTN. LOT 11, BLOCK B  
 VILLA MARIA WAL-MART ADDITION  
 VOL. 11981, PG. 28, O.R.B.C.T.  
 0.972 ACRES

PROJECT LEGEND	
PARCEL NO.:	VOL. 2468, PG. 303, D.R.N.C.T.
PARCEL ZONING:	PD - PLANNED DEVELOPMENT
SITE SETBACKS:	
FRONT YARD:	= 25 FEET
SIDE YARD:	= 5 FEET
BACK YARD:	= 5 FEET
EXISTING USAGE:	VACANT
PROPOSED USAGE:	RESTAURANT W/ DRIVE-THRU
<b>SITE BREAKDOWN:</b>	
TOTAL SITE AREA:	42,330 SF
SITE IMPERVIOUS AREA:	28,030 SF
PERCENT LOT COVERAGE:	66.2%
PERCENT OPEN SPACE:	33.8%
FLOOD ZONE:	ZONE X
<b>PARKING:</b>	
BUILDING AREA:	950 SF
PARKING REQUIRED AT 1/100:	10 SPACES
STANDARD PARKING PROVIDED:	14 SPACES
TOTAL HANDICAP PARKING PROVIDED:	1 SPACE
TOTAL SPACES PROVIDED:	15 SPACES

- EXISTING SETBACKS & EASEMENTS:**
- 25' BUILDING SETBACK
  - 5' BUILDING SETBACK
  - 20' ELECTRIC EASEMENT PER VOL. 141, PG. 493; VOL. 187, PG. 353; VOL. 215, PG. 579; VOL. 215, PG. 591; VOL. 229, PG. 71; D.R.B.C.T.
  - 12.5' LANDSCAPE EASEMENT PER VILLA MARIA WAL-MART ADDITION PLAT
  - UTILITY EASEMENT PER VILLA MARIA WAL-MART ADDITION PLAT
  - 2 PERMITTED CURB CUTS ALLOWED PER VOL. 10908, PG. 1; O.R.B.C.T.
  - PROPOSED 32' WIDE CROSS-ACCESS EASEMENT PER REPLAT
  - PROPOSED 15' WIDE SANITARY SEWER EASEMENT PER REPLAT
  - PROPOSED 10' STORM DRAIN EASEMENT PER REPLAT

**LEGEND:**

[Pattern]	- SIDEWALK / CONCRETE SECTION (6")
[Pattern]	- SIDEWALK WITH SEALANT
[Pattern]	- LIGHT DUTY ASPHALT SECTION (4")
[Pattern]	- MEDIUM DUTY ASPHALT SECTION (5")
[Pattern]	- TRASH ENCLOSURE CONCRETE SECTION (7")

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



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 DESIGNED: J.P.B.  
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STAMP: 11/15/22  
 EXP: 12/31/22

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 5750 Genesis Ct, Suite 103, Frisco, Texas 75034  
 tel 214-308-0008

PROJECT/CLIENT: #22122

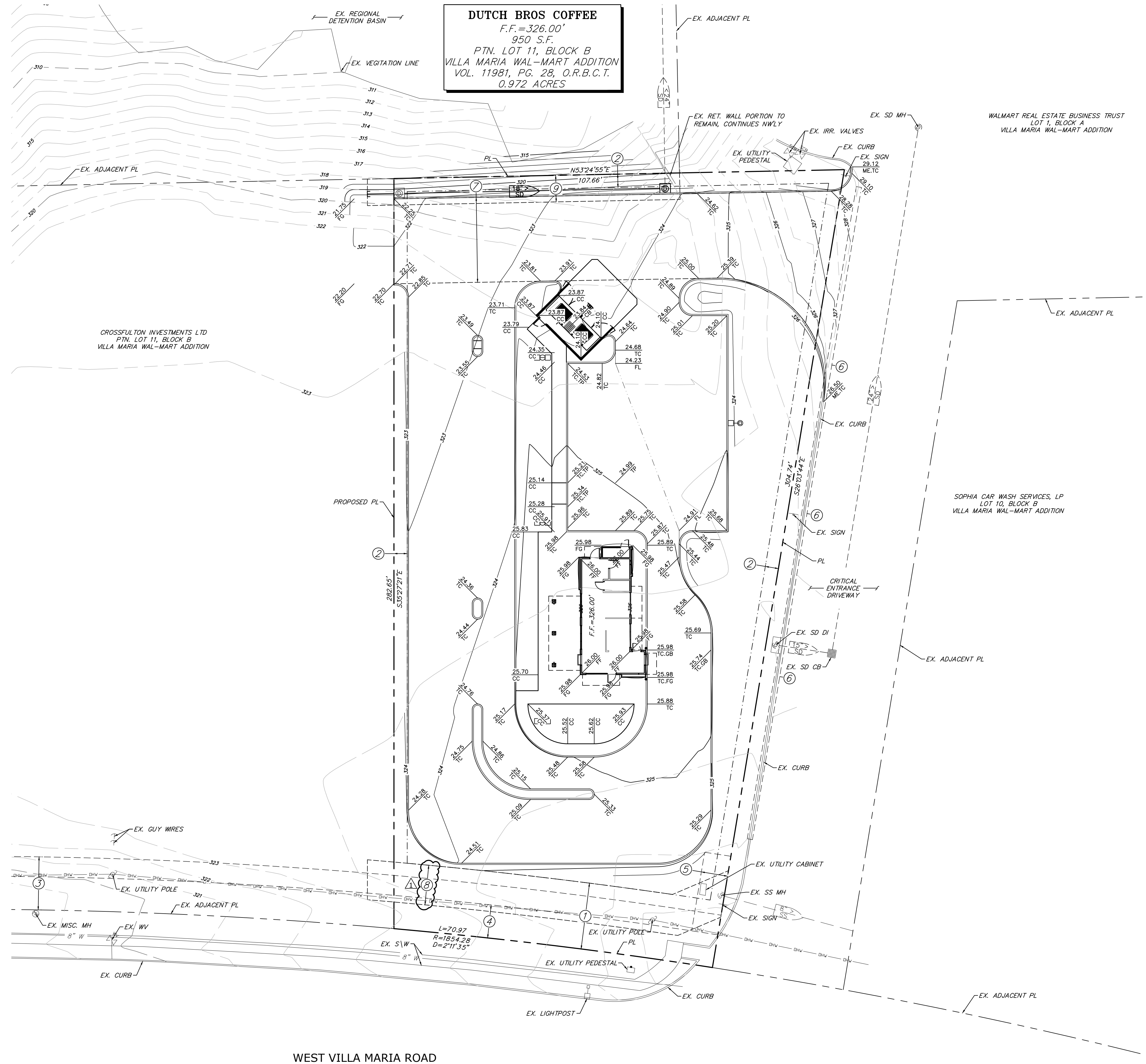
DATE: 10/27/22 SUBMITTAL  
 11/15/22 SITE PLAN REVIEW  
 CITY COMMENTS

SUBMITTAL RECORD:

SHEET TITLE: SITE PLAN

SHEET: C2.1





**DUTCH BROS COFFEE**  
 F.F. = 326.00'  
 950 S.F.  
 PTN. LOT 11, BLOCK B  
 VILLA MARIA WAL-MART ADDITION  
 VOL. 11981, PG. 28, O.R.B.C.T.  
 0.972 ACRES

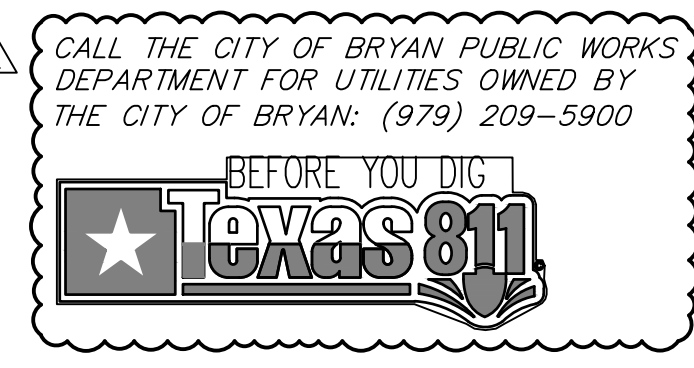
- EXISTING SETBACKS & EASEMENTS:**
- 25' BUILDING SETBACK
  - 5' BUILDING SETBACK
  - 20' ELECTRIC EASEMENT PER VOL. 141, PG. 493; VOL. 187, PG. 353; VOL. 215, PG. 579; VOL. 215, PG. 591; VOL. 229, PG. 71; D.R.B.C.T.
  - 12.5' LANDSCAPE EASEMENT PER VILLA MARIA WAL-MART ADDITION PLAT
  - UTILITY EASEMENT PER VILLA MARIA WAL-MART ADDITION PLAT
  - 2 PERMITTED CURB CUTS ALLOWED PER VOL. 10908, PG. 1; O.R.B.C.T.
  - PROPOSED 32' WIDE CROSS-ACCESS EASEMENT PER REPLAT
  - PROPOSED 15' WIDE SANITARY SEWER EASEMENT PER REPLAT
  - PROPOSED 10' STORM DRAIN EASEMENT PER REPLAT

- EROSION CONTROL NOTES:**
- IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE A QUALIFIED EROSION CONTROL INSPECTOR. CONTRACTOR TO PROVIDE THE EROSION CONTROL INSPECTORS NAME AND QUALIFICATIONS TO THE ENGINEER PRIOR TO BEGINNING CONSTRUCTION.
  - INSTALL SEDIMENT FENCE AND PERIMETER EROSION CONTROL MEASURES PRIOR TO BEGINNING CONSTRUCTION.
  - LEAVE NATIVE VEGETATION UNDISTURBED OUTSIDE AREAS OF CONSTRUCTION.
  - MODIFY EROSION CONTROL METHODS AS REQUIRED DUE TO WEATHER OR CONSTRUCTION CHANGES.
  - SEE EROSION CONTROL DETAIL SHEETS FOR ADDITIONAL NOTES AND DETAILS.
  - LOCATION OF ESCP FACILITIES SHOWN ARE APPROXIMATE. ALL FACILITIES TO BE FIELD PLACED PER CONSTRUCTION REQUIREMENTS.
  - CONTRACTOR TO MECHANICALLY REMOVE SEDIMENT FROM ROAD AND SHALL NOT WASH IT DOWN STORM SEWERS.

- NOTES:**
- ADD 300 TO ALL FINISHED GRADE OR INVERT ELEVATIONS
  - ALL SLOPES GREATER THAN 3:1 SHALL BE TREATED WITH 0.5' DEEP 6"-8" ROCK RIPRAP

WEST VILLA MARIA ROAD

**GRADING PLAN**  
 SCALE: 1" = 20'-0"



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STAMP: MATT RASMUSSEN  
 137495  
 LICENSED PROFESSIONAL ENGINEER  
 11/15/22  
 EXP: 12/31/22

DESIGNER: **TECTONICS DESIGN GROUP**  
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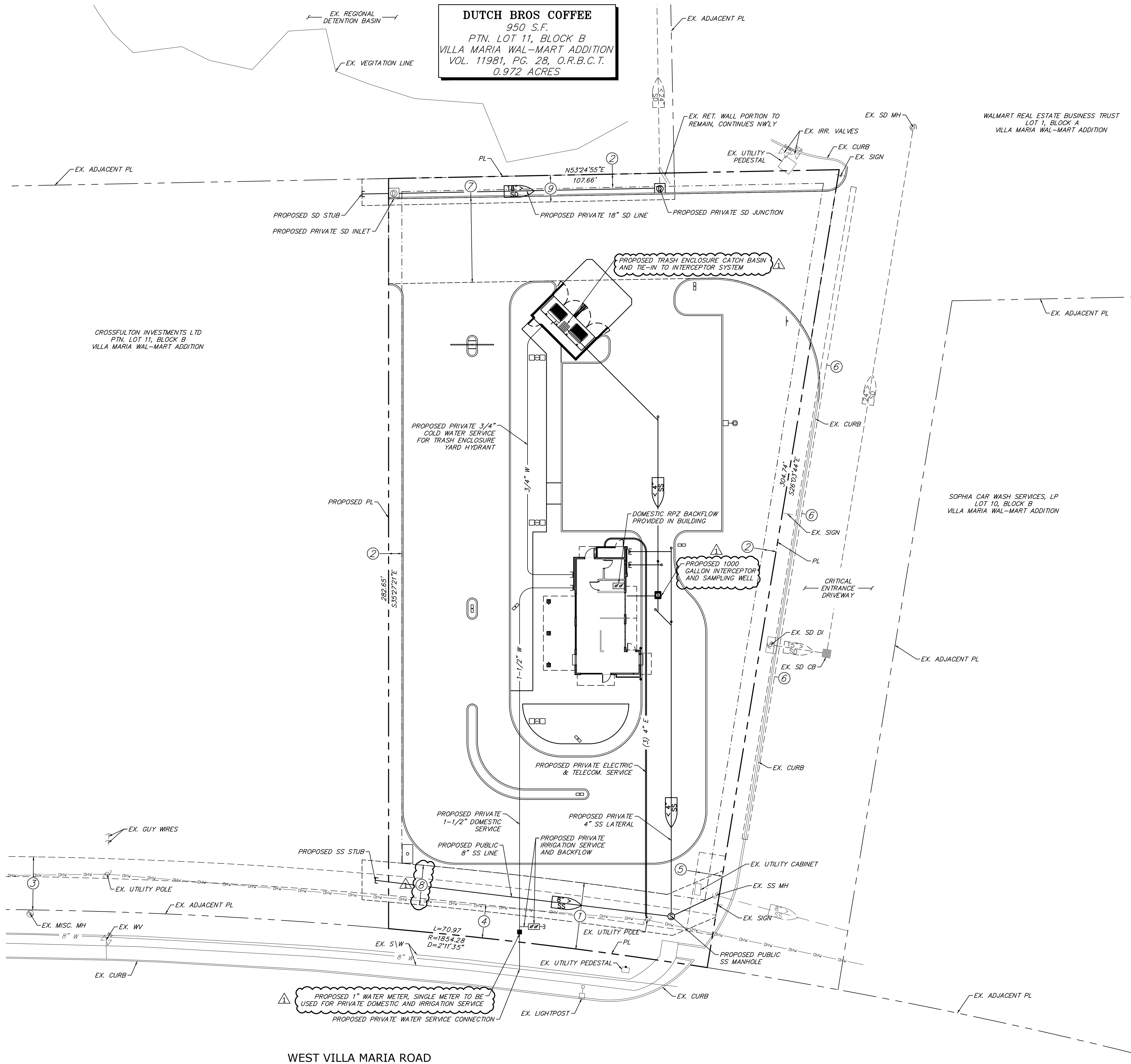
DATE: 10/27/22 SUBMITTAL  
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 CITY COMMENTS

SUBMITTAL RECORD: # 22122

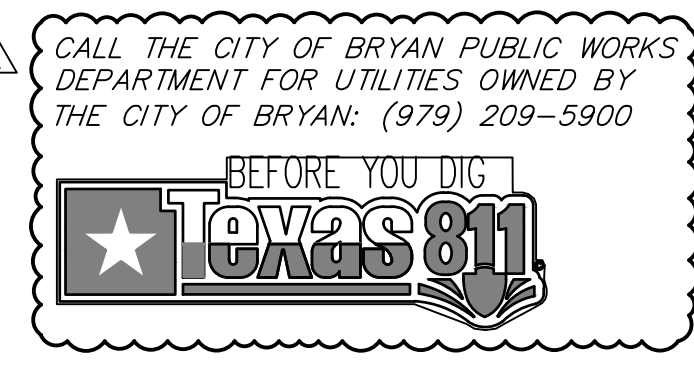
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SHEET: C3.1





1"=20'-0" Dutch Bros TX0306 West Villa Maria Road, Bryan, TX 22122, C41



**UTILITY PLAN**  
 SCALE: 1" = 20'-0"



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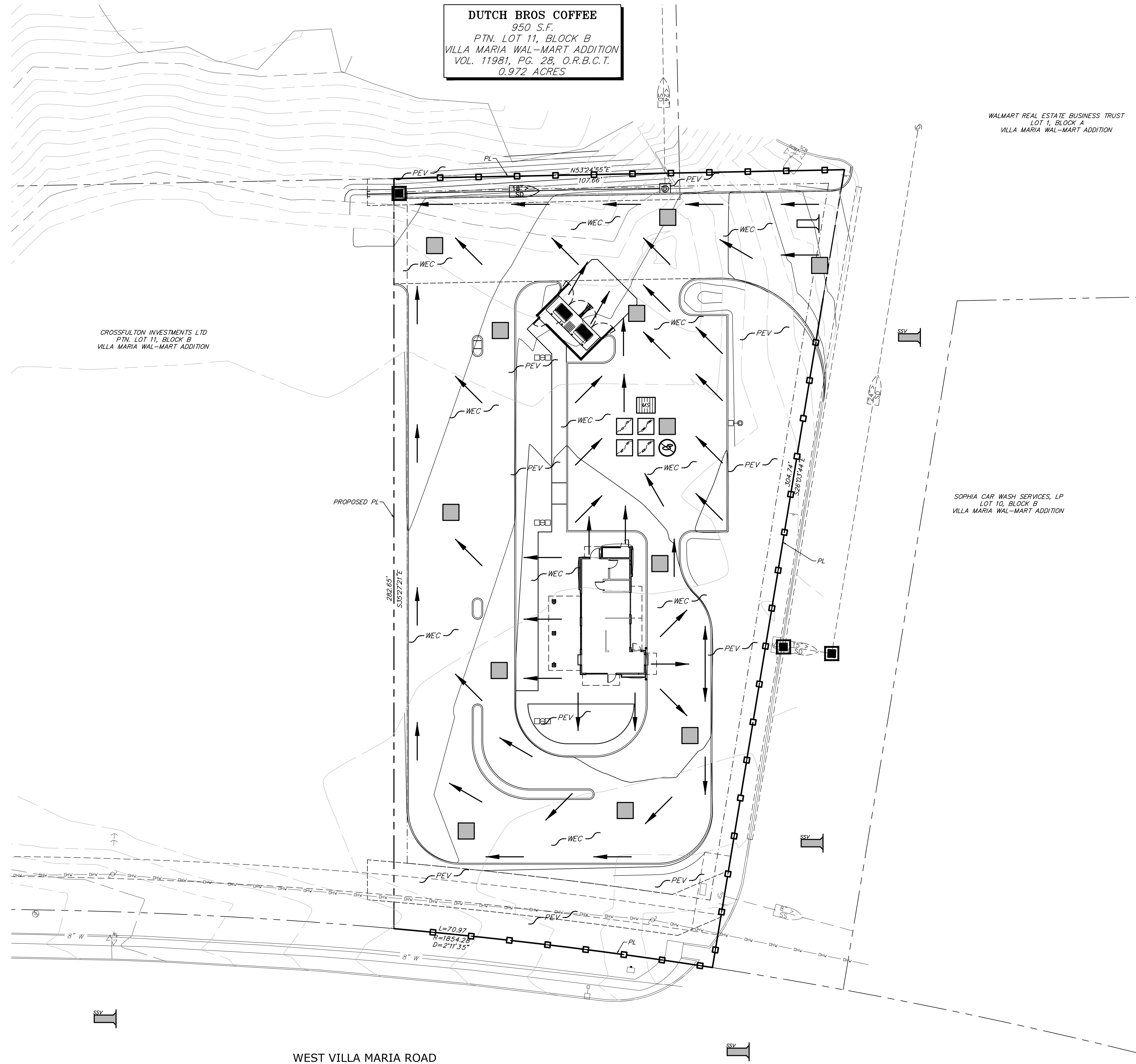
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 5750 Genesis Ct, Suite 103, Frisco, Texas 75034  
 tel 214-308-0008

DATE: 10/27/22 SUBMITTAL  
 11/15/22 SITE PLAN REVIEW  
 CITY COMMENTS

SHEET TITLE: UTILITY PLAN  
 SHEET: C4.1



**DUTCH BROS COFFEE**  
 950 S.F.  
 PTN. LOT 11, BLOCK B  
 VILLA MARIA WAL-MART ADDITION  
 VOL. 11981, PG. 28, O.R.B.C.T.  
 0.972 ACRES



**STORMWATER NOTES:**

1. THE OWNER, SITE DEVELOPER, CONTRACTOR AND/OR THEIR AUTHORIZED AGENTS SHALL EACH DAY REMOVE ALL SEDIMENT, MUD, CONSTRUCTION DEBRIS, OR OTHER POTENTIAL POLLUTANTS THAT MAY HAVE BEEN DISCHARGED TO, OR ACCUMULATE IN, THE PUBLIC RIGHT OF WAYS OF BRAZOS COUNTY AS A RESULT OF CONSTRUCTION ACTIVITIES ASSOCIATED WITH THIS SITE DEVELOPMENT OR CONSTRUCTION PROJECT. SUCH MATERIALS SHALL BE PREVENTED FROM ENTERING THE STORM SEWER SYSTEM.
2. ADDITIONAL CONSTRUCTION SITE DISCHARGE BEST MANAGEMENT PRACTICES MAY BE REQUIRED OF THE OWNER AND HIS OR HER AGENTS DUE TO UNFORESEEN EROSION PROBLEMS OR IF THE SUBMITTED PLAN DOES NOT MEET THE PERFORMANCE STANDARDS SPECIFIED BY BRAZOS COUNTY.
3. TEMPORARY OR PERMANENT STABILIZATION PRACTICES WILL BE INSTALLED ON DISTURBED AREAS AS SOON AS PRACTICABLE AND NO LATER THAN 14 DAYS AFTER THE CONSTRUCTION ACTIVITY IN THAT PORTION OF THE SITE HAS TEMPORARILY OR PERMANENTLY CEASED.
4. AT A MINIMUM, THE CONTRACTOR OR HIS AGENT SHALL INSPECT ALL DISTURBED AREAS, AREAS USED FOR STORAGE OF MATERIALS AND EQUIPMENT THAT ARE EXPOSED TO PRECIPITATION, VEHICLE ENTRANCE AND EXIT LOCATIONS AND ALL BMPs WEEKLY, PRIOR TO A FORECASTED RAIN EVENT AND WITHIN 24 HOURS AFTER ANY ACTUAL RAIN EVENT. THE CONTRACTOR OR HIS AGENT SHALL UPDATE OR MODIFY THE STORMWATER POLLUTION PREVENTION PLAN AS NECESSARY. SOME EXCEPTIONS TO WEEKLY INSPECTION MAY APPLY, SUCH AS FROZEN GROUND CONDITIONS OR SUSPENSION OF LAND DISTURBANCE ACTIVITIES.
5. ACCUMULATED SEDIMENT IN BMPs SHALL BE REMOVED WITHIN SEVEN DAYS AFTER A STORMWATER RUNOFF EVENT OR PRIOR TO THE NEXT ANTICIPATED STORM EVENT WHICHEVER IS EARLIER. SEDIMENT MUST BE REMOVED WHEN BMP DESIGN CAPACITY HAS BEEN REDUCED BY 50 PERCENT OR MORE.
6. REFER TO TEXAS EROSION AND SEDIMENT CONTROL BEST MANAGEMENT PRACTICES MANUAL FOR FURTHER CONSTRUCTION SITE BEST MANAGEMENT PRACTICES DEFINITIONS.

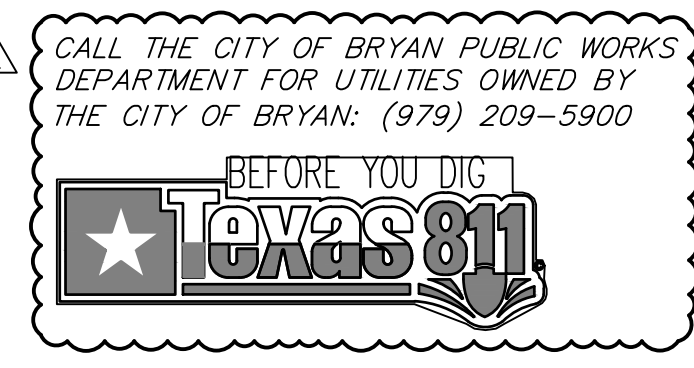
LEGEND		
BMP	#	SYMBOL
REVEGETATION	SS-2	
WIND EROSION AND DUST CONTROL	WE-1	
SILT FENCES	SC-1	
STABILIZED CONSTRUCTION SITE ENTRANCE / EXITS	TC-1	
STORM DRAIN OUTLET PROTECTION	SS-10	
STORM DRAIN INLET PROTECTION	SC-10	
STOCKPILE MANAGEMENT	WM-3	
STREET SWEEPING AND VACUUMING	SC-7	
SPILL PREVENTION AND CONTROL	WM-4	
CONCRETE WASTE MANAGEMENT	WM-8	
VEHICLE AND EQUIPMENT FUELING	NS-9	
VEHICLE AND EQUIPMENT MAINTENANCE	NS-10	
MATERIAL DELIVERY STORAGE	WM-1	
PAVEMENT CONSTRUCTION MANAGEMENT	NS-3	
GRADED FLOW DIRECTION		

WEST VILLA MARIA ROAD

**BMP PLAN**  
 SCALE: 1" = 20'-0"



1"=20'-0" Dutch Bros TX0306 West Villa Maria Road, Bryan, TX 22122 C51



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 STAMP: EXP: 12/31/22

DESIGNER: **TECTONICS DESIGN GROUP**  
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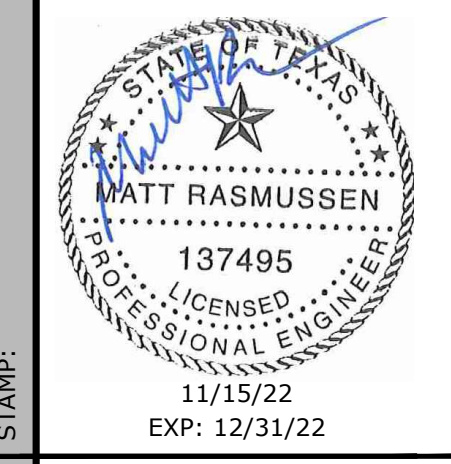
PROJECT/CLIENT:   
 # 22122  
 DATE: 10/27/22 SUBMITTAL  
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 SHEET TITLE: C5.1



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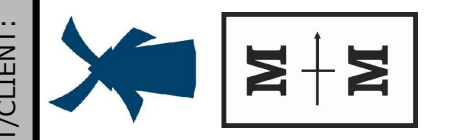
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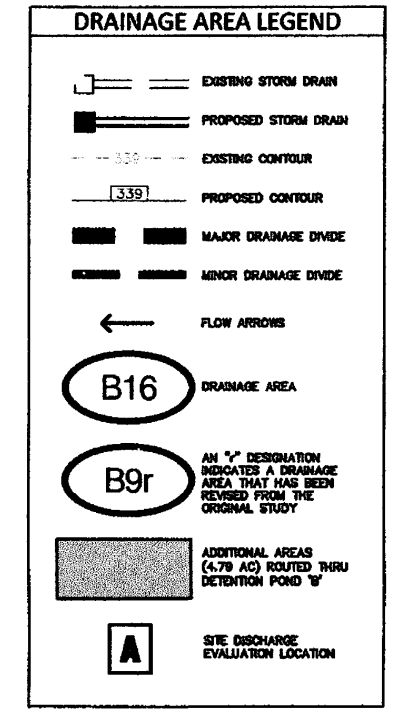
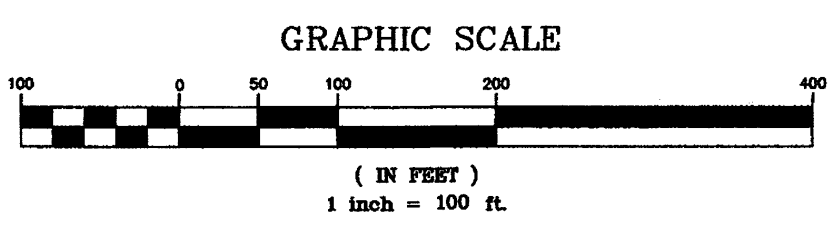
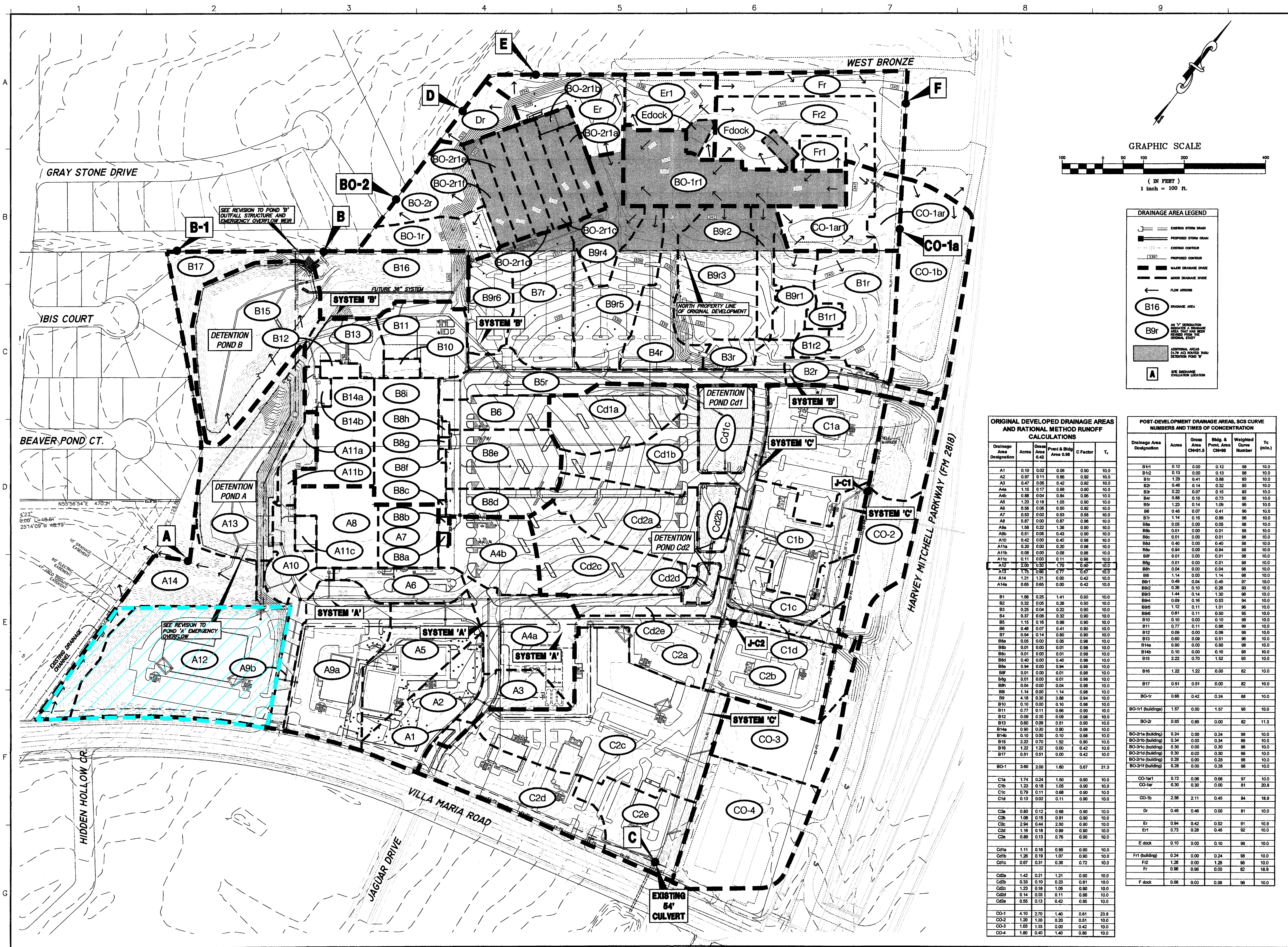


PROJECT/CLIENT: #22122

DATE: SUBMITTAL 10/27/22  
11/15/22 SITE PLAN REVIEW  
CITY COMMENTS

SHEET TITLE: EXISTING DRAINAGE MAP

SHEET: EX2



**ORIGINAL DEVELOPED DRAINAGE AREAS AND RATIONAL METHOD RUNOFF CALCULATIONS**

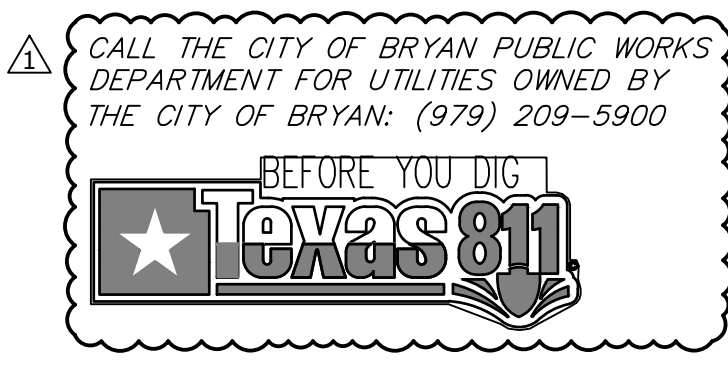
Drainage Area Designation	Area (Acres)	Runoff Coefficient	Peak Flow (cfs)	Time (min)	
A1	0.10	0.02	0.09	10.0	
A2	0.07	0.11	0.06	10.0	
A3	0.47	0.05	0.42	10.0	
A4a	1.15	0.17	0.98	10.0	
A4b	0.88	0.04	0.84	10.0	
A5	1.23	0.18	1.05	10.0	
A6	0.96	0.08	0.90	10.0	
A7	0.53	0.05	0.53	10.0	
A8	0.87	0.00	0.87	10.0	
A9a	1.58	0.22	1.36	10.0	
A9b	0.51	0.08	0.43	10.0	
A10	0.42	0.00	0.42	10.0	
A11a	0.20	0.00	0.20	10.0	
A11b	0.09	0.00	0.09	10.0	
A11c	0.11	0.00	0.11	10.0	
A12	2.00	0.30	1.70	10.0	
A13	1.76	1.38	0.77	10.0	
A14	1.21	1.21	0.00	0.42	10.0
A14a	0.68	0.68	0.00	0.42	10.0
B1	1.86	0.25	1.41	10.0	
B2	0.32	0.05	0.28	10.0	
B3	0.25	0.04	0.22	10.0	
B4	0.37	0.06	0.32	10.0	
B5	1.15	0.16	0.99	10.0	
B6	0.48	0.07	0.41	10.0	
B7	0.94	0.14	0.80	10.0	
B8a	0.05	0.00	0.05	10.0	
B8b	0.01	0.00	0.01	10.0	
B8c	0.01	0.00	0.01	10.0	
B8d	0.01	0.00	0.01	10.0	
B8e	0.01	0.00	0.01	10.0	
B8f	0.01	0.00	0.01	10.0	
B8g	0.01	0.00	0.01	10.0	
B8h	0.01	0.00	0.01	10.0	
B9	1.14	0.00	1.14	10.0	
B9a	4.18	0.30	3.88	10.0	
B9b	0.10	0.00	0.10	10.0	
B9c	0.77	0.11	0.68	10.0	
B9d	0.09	0.00	0.09	10.0	
B9e	0.60	0.09	0.51	10.0	
B9f	0.91	0.09	0.81	10.0	
B9g	0.90	0.30	0.90	10.0	
B9h	0.10	0.00	0.10	10.0	
B9i	2.22	0.70	1.52	10.0	
B9j	1.22	1.22	0.00	0.42	10.0
B9k	0.51	0.51	0.00	0.42	10.0
B9l	1.80	2.00	1.80	0.67	21.3
C1a	1.74	0.24	1.50	10.0	
C1b	1.29	0.16	1.02	10.0	
C1c	0.79	0.11	0.68	10.0	
C1d	0.19	0.02	0.11	10.0	
C2a	0.80	0.12	0.68	10.0	
C2b	1.08	0.15	0.91	10.0	
C2c	2.94	0.44	2.50	10.0	
C2d	1.16	0.18	0.98	10.0	
C2e	0.88	0.13	0.76	10.0	
C2f	1.11	0.16	0.96	10.0	
C2g	1.26	0.19	1.07	10.0	
C2h	0.67	0.31	0.36	0.72	10.0
C2i	1.42	0.21	1.21	10.0	
C2j	0.33	0.10	0.23	0.81	10.0
C2k	1.22	0.18	1.04	10.0	
C2l	0.14	0.03	0.11	0.82	10.0
C2m	0.55	0.13	0.42	0.85	10.0
CO-1	4.10	2.70	1.40	0.61	23.8
CO-2	1.30	1.30	0.20	0.51	10.0
CO-3	1.00	1.00	0.00	0.42	10.0
CO-4	1.80	0.00	1.40	0.85	10.0

**POST-DEVELOPMENT DRAINAGE AREAS, SCS CURVE NUMBERS AND TIMES OF CONCENTRATION**

Drainage Area Designation	Area (Acres)	Runoff Coefficient	Peak Flow (cfs)	Time (min)	
B1r1	0.12	0.00	0.12	10.0	
B1r2	0.13	0.00	0.13	10.0	
B1r3	1.20	0.41	0.88	10.0	
B2r	0.42	0.14	0.32	10.0	
B3r	0.22	0.07	0.15	10.0	
B4r	0.83	0.15	0.73	10.0	
B5r	1.23	0.14	1.09	10.0	
B6r	0.48	0.07	0.41	10.0	
B7r	1.14	0.15	0.98	10.0	
B8r	0.05	0.00	0.05	10.0	
B8s	0.01	0.00	0.01	10.0	
B8t	0.01	0.00	0.01	10.0	
B8u	0.01	0.00	0.01	10.0	
B8v	0.01	0.00	0.01	10.0	
B8w	0.01	0.00	0.01	10.0	
B8x	0.01	0.00	0.01	10.0	
B8y	0.01	0.00	0.01	10.0	
B8z	0.04	0.00	0.04	10.0	
B8aa	1.14	0.00	1.14	10.0	
B8ab	0.48	0.04	0.48	10.0	
B8ac	0.38	0.10	0.28	10.0	
B8ad	1.44	0.14	1.30	10.0	
B8ae	0.68	0.16	0.53	10.0	
B8af	1.12	0.11	1.01	10.0	
B8ag	0.91	0.11	0.80	10.0	
B8ah	0.77	0.11	0.68	10.0	
B8ai	0.09	0.00	0.09	10.0	
B8aj	0.60	0.09	0.51	10.0	
B8ak	0.91	0.09	0.81	10.0	
B8al	0.90	0.30	0.90	10.0	
B8am	0.10	0.00	0.10	10.0	
B8an	2.22	0.70	1.52	10.0	
B8ao	1.22	1.22	0.00	0.42	10.0
B8ap	0.51	0.51	0.00	0.42	10.0
B8aq	1.80	2.00	1.80	0.67	21.3
B8ar	1.74	0.24	1.50	10.0	
B8as	1.29	0.16	1.02	10.0	
B8at	0.79	0.11	0.68	10.0	
B8au	0.19	0.02	0.11	10.0	
B8av	0.80	0.12	0.68	10.0	
B8aw	1.08	0.15	0.91	10.0	
B8ax	2.94	0.44	2.50	10.0	
B8ay	1.16	0.18	0.98	10.0	
B8az	0.88	0.13	0.76	10.0	
B8ba	1.11	0.16	0.96	10.0	
B8bb	1.26	0.19	1.07	10.0	
B8bc	0.67	0.31	0.36	0.72	10.0
B8bd	1.42	0.21	1.21	10.0	
B8be	0.33	0.10	0.23	0.81	10.0
B8bf	1.22	0.18	1.04	10.0	
B8bg	0.14	0.03	0.11	0.82	10.0
B8bh	0.55	0.13	0.42	0.85	10.0
B8bi	4.10	2.70	1.40	0.61	23.8
B8bj	1.30	1.30	0.20	0.51	10.0
B8bk	1.00	1.00	0.00	0.42	10.0
B8bl	1.80	0.00	1.40	0.85	10.0

PROPOSED PROJECT AREA

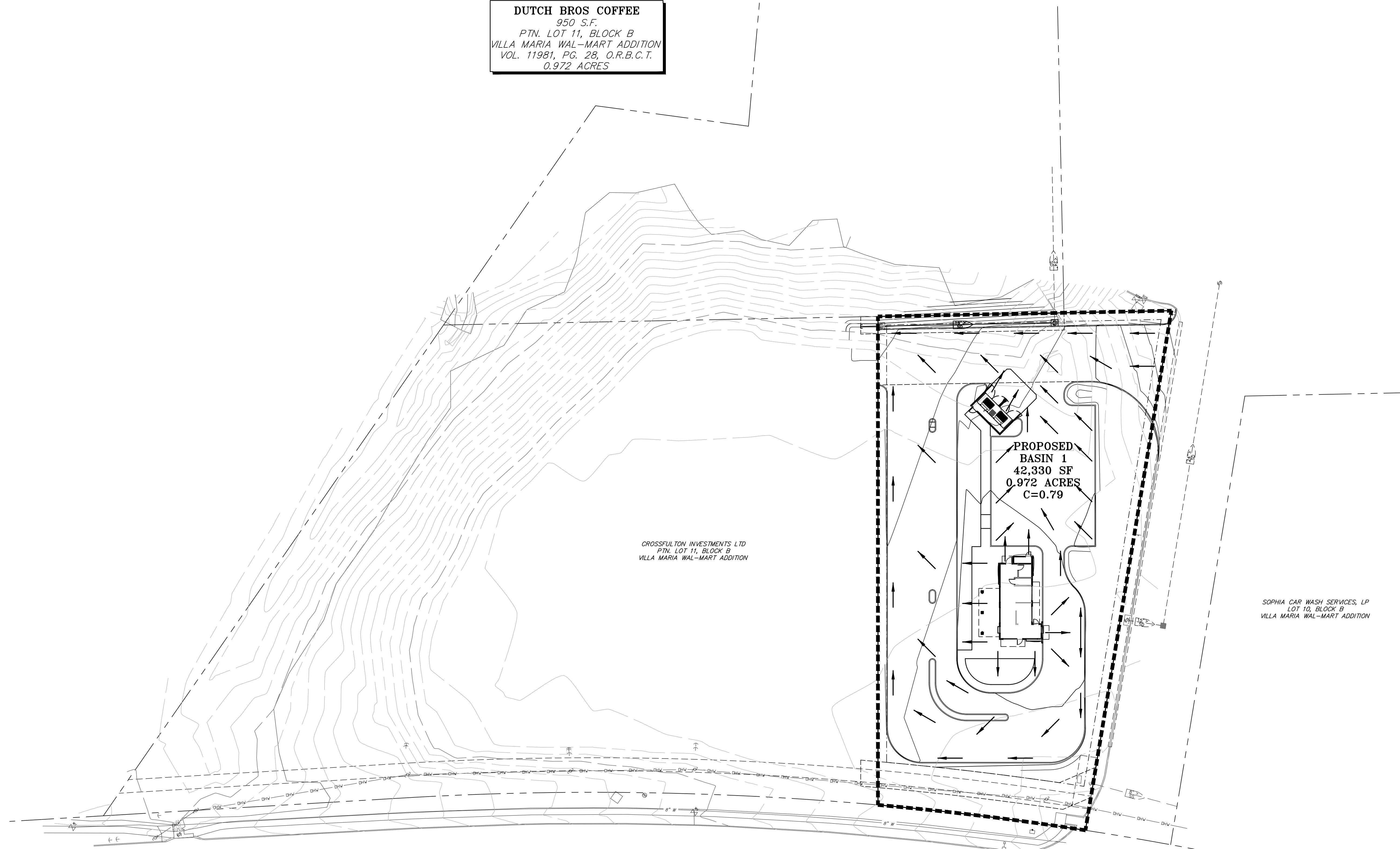
EXISTING DRAINAGE MAP  
SCALE: N.T.S.



N.T.S. - Dutch Bros TX0306 West Villa Maria Road, Bryan, TX 22122 - EX2



**DUTCH BROS COFFEE**  
 950 S.F.  
 PTN. LOT 11, BLOCK B  
 VILLA MARIA WAL-MART ADDITION  
 VOL. 11981, PG. 28, O.R.B.C.T.  
 0.972 ACRES



CROSSFULTON INVESTMENTS LTD  
 PTN. LOT 11, BLOCK B  
 VILLA MARIA WAL-MART ADDITION

SOPHIA CAR WASH SERVICES, LP  
 LOT 10, BLOCK B  
 VILLA MARIA WAL-MART ADDITION

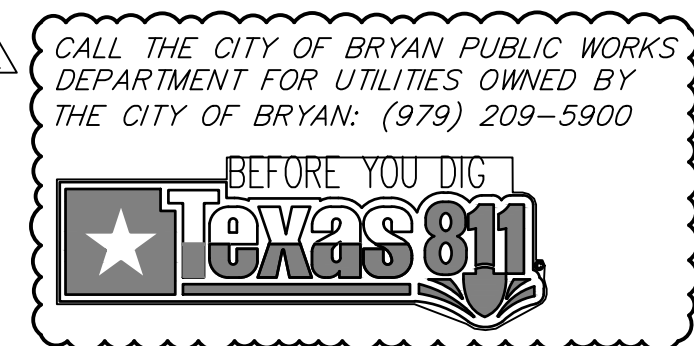
NO DRAINAGE TO  
 TXDOT RIGHT-OF-WAY

WEST VILLA MARIA ROAD

**TOTAL SITE IMPERVIOUS**  
 IMPERVIOUS AREA - 27,080 S.F.  
 BUILDING AREA - 950 S.F.  
 TOTAL IMPERVIOUS AREA - 28,030 S.F.

PROPOSED SITE CALCULATIONS								ORIGINAL DEVELOPED CALCULATIONS					
D.A. NO.	AREA	A <sub>Imp</sub>	A <sub>PER</sub>	C	T <sub>c</sub>	I <sub>100</sub>	Q <sub>100</sub>	D.A. NO.	AREA	C	T <sub>c</sub>	I <sub>100</sub>	Q <sub>100</sub>
BASIN 1	0.97 acres	0.64 acres	0.33 acres	0.79	10 min	11.64 in/hr	8.92 cfs	A PTN. OF D.A. A12	0.97 acres	0.90	10 min	11.64 in/hr	10.16 cfs

Δ = -1.24 cfs



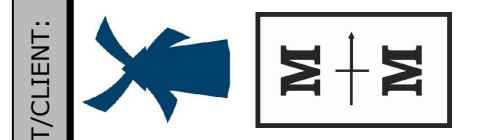
**DEVELOPED BASIN MAP**  
 SCALE: 1" = 30'-0"



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**DRAWN:** D.J.M.  
**DESIGNED:** J.P.B.  
**CHECKED/STAMPED:** MATT K. RASMUSSEN, P.E.  
**STAMP:** MATT RASMUSSEN 137495 LICENSED PROFESSIONAL ENGINEER 11/15/22 EXP: 12/31/22

**DESIGNER:** FIRM #22395  
**TECTONICS DESIGN GROUP**  
 730 Sandhill Rd., #250, Reno, Nevada 89521  
 tel: 775-824-9988 fax: 775-824-9900  
 www.tectonicsdesigngroup.com

**Dutch Bros No.: TX0306**  
 1642 West Villa Maria Road, Bryan, TX 77807  
**MAIN & MAIN**  
 CAPITAL GROUP, LLC  
 5750 Genesis Ct, Suite 103, Frisco, Texas 75034  
 tel 214-308-0008



**PROJECT/CLIENT:** #22122  
**DATE:** 10/27/22 SUBMITTAL  
 11/15/22 SITE PLAN REVIEW  
 11/15/22 CITY COMMENTS

**SUBMITTAL RECORD:**

**SHEET TITLE:** DEVELOPED BASIN MAP

**SHEET:** EX3

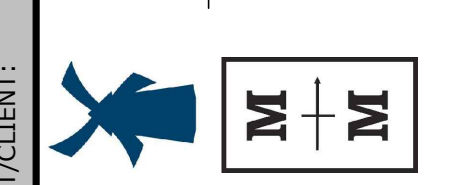
1"=30'-0" Dutch Bros TX0306 West Villa Maria Road, Bryan, TX 22122 EX3





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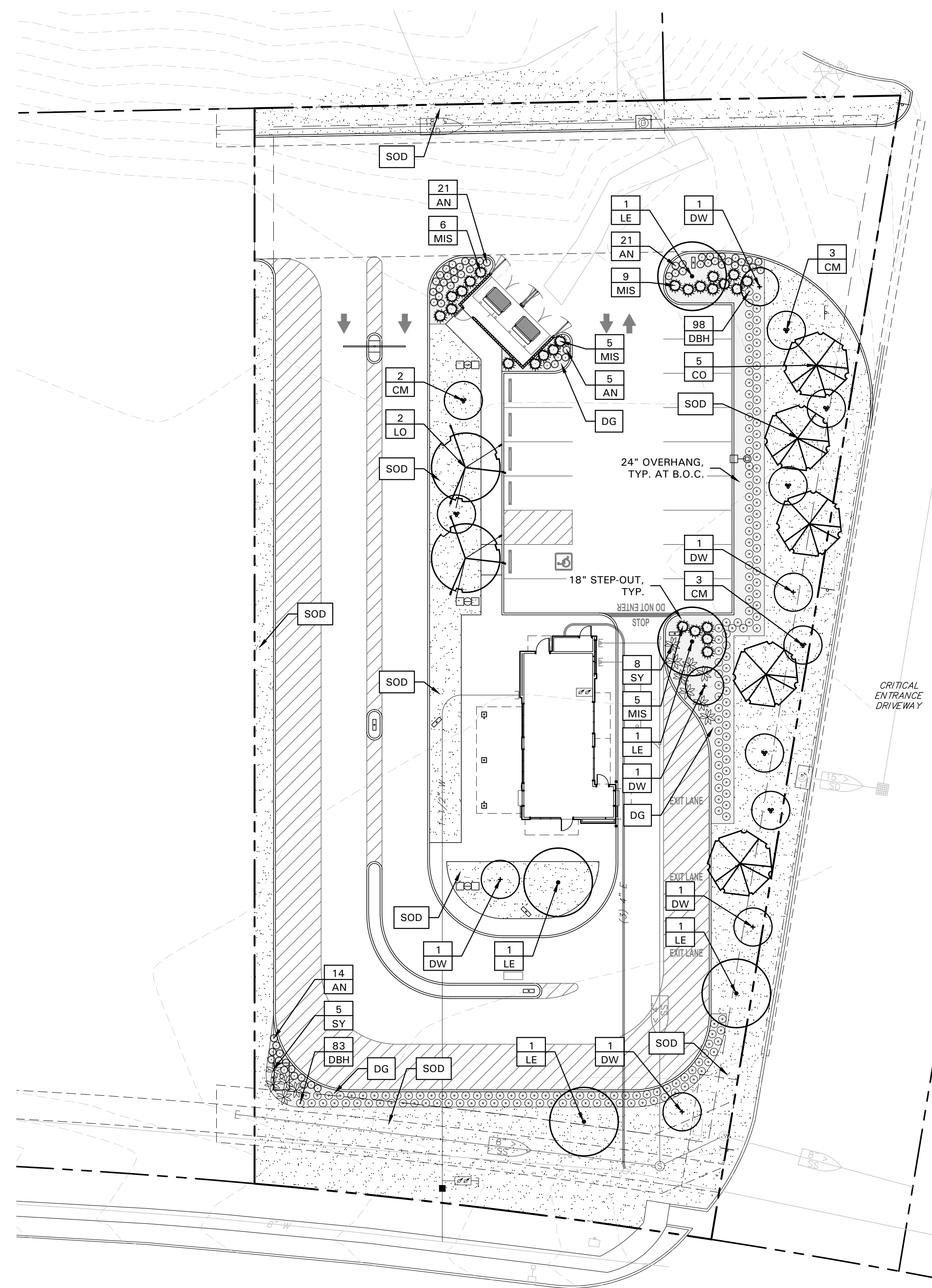


DATE:	SUBMITTAL
10/12/22	SITE PLAN REVIEW
11/16/22	SITE PLAN REVIEW

#	VALUE	S.F.	S.F.
8	100	800	
5	250	1,250	
6	100	600	
5	250	1,250	
2	250	500	
61	10	610	
181	10	1,810	
25	10	250	
13	10	130	
<b>TOTAL LANDSCAPE:</b>		<b>7,200</b>	

WALMART REAL ESTATE BUSINESS TRUST  
 LOT 1, BLOCK A  
 VILLA MARIA WAL-MART ADDITION

SOPHIA CAR WASH SERVICES, LP  
 LOT 10, BLOCK B  
 VILLA MARIA WAL-MART ADDITION



**LANDSCAPE NOTES**

- CONTRACTOR SHALL VERIFY ALL EXISTING AND PROPOSED SITE ELEMENTS AND NOTIFY LANDSCAPE ARCHITECT OF ANY DISCREPANCIES. SURVEY DATA OF EXISTING CONDITIONS WAS SUPPLIED BY OTHERS.
- CONTRACTOR SHALL LOCATE ALL EXISTING UNDERGROUND UTILITIES AND NOTIFY LANDSCAPE ARCHITECT OF ANY CONFLICTS. CONTRACTOR SHALL EXERCISE CAUTION WHEN WORKING IN THE VICINITY OF UNDERGROUND UTILITIES.
- CONTRACTOR SHALL PROVIDE A MINIMUM 2% SLOPE AWAY FROM ALL STRUCTURES.
- CONTRACTOR SHALL FINE GRADE AREAS TO ACHIEVE FINAL CONTOURS AS INDICATED. LEAVE AREAS TO RECEIVE TOPSOIL 3" BELOW FINAL FINISHED GRADE IN PLANTING AREAS AND 1" BELOW FINAL FINISHED GRADE IN LAWN AREAS.
- ALL PLANTING BEDS AND LAWN AREAS SHALL BE SEPARATED BY STEEL EDGING. NO STEEL EDGING SHALL BE INSTALLED ADJACENT TO BUILDINGS, WALKS, OR CURBS. CUT STEEL EDGING AT 45 DEGREE ANGLE WHERE IT INTERSECTS WALKS AND CURBS.
- TOP OF MULCH SHALL BE 1/2" MINIMUM BELOW THE TOP OF WALKS AND CURBS.
- ALL LAWN AREAS SHALL BE SOLID SOD BERMUDAGRASS, UNLESS OTHERWISE NOTED ON THE DRAWINGS.
- ALL REQUIRED LANDSCAPE AREAS SHALL BE PROVIDED WITH AN AUTOMATIC UNDERGROUND IRRIGATION SYSTEM WITH RAIN AND FREEZE SENSORS AND EVAPOTRANSPIRATION (ET) WEATHER-BASED CONTROLLERS AND SAID IRRIGATION SYSTEM SHALL BE DESIGNED BY A QUALIFIED PROFESSIONAL AND INSTALLED BY A LICENSED IRRIGATOR.
- CONTRACTOR SHALL PROVIDE BID PROPOSAL LISTING UNIT PRICES FOR ALL MATERIAL PROVIDED.
- CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL REQUIRED LANDSCAPE AND IRRIGATION PERMITS.

**MAINTENANCE NOTES**

- THE OWNER, TENANT AND THEIR AGENT, IF ANY, SHALL BE JOINTLY AND SEVERALLY RESPONSIBLE FOR THE MAINTENANCE OF ALL LANDSCAPE.
- ALL LANDSCAPE SHALL BE MAINTAINED IN A NEAT AND ORDERLY MANNER AT ALL TIMES. THIS SHALL INCLUDE MOWING, EDGING, PRUNING, FERTILIZING, WATERING, WEEDING AND OTHER SUCH ACTIVITIES COMMON TO LANDSCAPE MAINTENANCE.
- ALL LANDSCAPE AREAS SHALL BE KEPT FREE OF TRASH, LITTER, WEEDS AND OTHER SUCH MATERIAL OR PLANTS NOT PART OF THIS PLAN.
- ALL PLANT MATERIAL SHALL BE MAINTAINED IN A HEALTHY AND GROWING CONDITION AS IS APPROPRIATE FOR THE SEASON OF THE YEAR.
- ALL PLANT MATERIAL WHICH DIES SHALL BE REPLACED WITH PLANT MATERIAL OF EQUAL OR BETTER VALUE.
- CONTRACTOR SHALL PROVIDE SEPARATE BID PROPOSAL FOR ONE YEAR'S MAINTENANCE TO BEGIN AFTER FINAL ACCEPTANCE.

**LANDSCAPE TABULATIONS**

THE CITY OF BRYAN, TEXAS  
 VILLA MARIA OVERLAY DISTRICT

SITE LANDSCAPE

- 17% of the site to be landscape area.
- Not less than 50% of required area shall be trees.
- Not less than 50% of trees planted shall be canopy.
- All parking islands must have a canopy tree.

Required	Provided
7,196 s.f. (17%)	7,200 s.f. (17%)
3,598 s.f. trees (50%)	4,400 s.f. trees (61%)
1,799 s.f. canopy (50%)	3,000 s.f. canopy (84%)

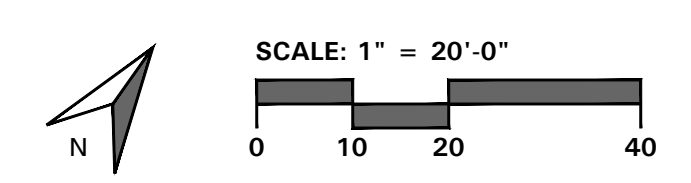
Total Site Area: 42,330 s.f.

**PLANT LIST**

SYMBOL	BOTANICAL NAME	COMMON NAME	QTY.	SIZE	REMARKS
<b>TREES</b>					
CM	<i>Lagerstroemia indica</i> 'Natchez'	Crape Myrtle 'Natchez'	8	30 gal.	container grown, 3-5 trunk, no cross canes, 8' ht., 4' spread, matching
CO	<i>Quercus muhlenbergii</i>	Chickapin Oak	5	4" cal.	container grown, 15' ht., 5' spread, 4' branching ht., matching
DW	<i>Chilopsis linearis</i>	Desert Willow	6	30 gal.	container grown, 3-5 trunk, 8' ht. min., 4' spread min.
LE	<i>Ulmus parvifolia</i> 'Sempervirens'	Lacebark Elm	5	4" cal.	container grown, 15' ht., 5' spread, 4' branching ht., matching
LO	<i>Quercus virginiana</i>	Live Oak	2	3" cal.	container grown, 12' ht., 4' spread, 4' branching ht., matching
<b>SHRUBS/GROUND COVER</b>					
AN	<i>Juniperus tobira</i> 'Andorra'	Andorra Juniper	61	5 gal.	container full, 20" spread, 24" o.c.
DBH	<i>Ilex cornuta</i> 'Dwarf Burford'	Dwarf Burford Holly	181	5 gal.	container full, 24" ht., 24" spread, 36" o.c.
MIS	<i>Miscanthus sinensis</i> 'Adagio'	Miscanthus 'Adagio'	25	5 gal.	container full, 36" o.c.
SY	<i>Yucca recurvifolia</i>	Softleaf Yucca	13	5 gal.	container full, 36" o.c.
SOD	<i>Cynodon dactylon</i>	Common Bermudagrass			solid sod, refer to Solid Sod Notes
DG		Decomposed Granite			4" depth

NOTE: ALL TREES SHALL HAVE STRAIGHT TRUNKS AND BE MATCHING WITHIN VARIETIES.  
 PLANT LIST IS AN AID TO BIDDERS ONLY. CONTRACTOR SHALL VERIFY ALL QUANTITIES ON PLAN.  
 ALL HEIGHTS AND SPREADS ARE MINIMUMS. ALL PLANT MATERIAL SHALL MEET OR EXCEED REMARKS AS INDICATED.

WEST VILLA MARIA ROAD



4245 North Central Expy  
 Suite 501  
 Dallas, Texas 75205  
 214.865.7192 office



SECTION 32 9300 - LANDSCAPE

PART 1 - GENERAL

1.1 REFERENCED DOCUMENTS

- A. Refer to Landscape Plans, notes, details, bidding requirements, special provisions, and schedules for additional requirements.

1.2 DESCRIPTION OF WORK

- A. Work included: Furnish all supervision, labor, materials, services, equipment and appliances required to complete the work covered in conjunction with the landscaping covered in these specifications and landscaping plans, including:
  - Planting (trees, shrubs and grasses)
  - Bed preparation and fertilization
  - Notification of sources
  - Water and maintenance until final acceptance
  - Guarantee

1.3 REFERENCE STANDARDS

- A. American Standard for Nursery Stock published by American Association of Nurserymen: April 14, 2014 Edition; by American National Standards Institute, Inc. (Z60.1) - plant material
- B. American Joint Committee on Horticultural Nomenclature: 1942 Edition of Standardized Plant Names.
- C. Texas Association of Nurserymen, Grades and Standards
- D. Hortis Third, 1976 - Cornell University

1.4 NOTIFICATION OF SOURCES AND SUBMITTALS

- A. Samples: Provide representative quantities of sandy loam soil, mulch, bed mix material, gravel, crushed stone, steel edging and tree stakes. Samples shall be approved by Owner's Authorized Representative before use on the project.

1.5 JOB CONDITIONS

- A. General Contractor to complete the following punch list: Prior to Landscape Contractor initiating any portion of landscape installation, General Contractor shall leave planting bed areas three (3") inches below final finish grade of sidewalks, drives and curbs as shown on the drawings. All lawn areas to receive solid sod shall be left one (1") inch below the final finish grade of sidewalks, drives and curbs. All construction debris shall be removed prior to Landscape Contractor beginning any work.
- B. Storage of materials and equipment at the job site will be at the risk of the Landscape Contractor. The Owner cannot be held responsible for theft or damage.

1.6 MAINTENANCE AND GUARANTEE

- A. Maintenance:
  - The Landscape Contractor shall be held responsible for the maintenance of all work from the time of planting until final acceptance by the Owner. No trees, shrubs, groundcover or grass will be accepted unless they show healthy growth and satisfactory foliage conditions.
  - Maintenance shall include watering of trees and plants, cultivation, weeding spraying, edging, pruning of trees, mowing of grass, cleaning up and all other work necessary of maintenance.
  - A written notice requesting final inspection and acceptance should be submitted to the Owner at least seven (7) days prior to completion. An on-site inspection by the Owner's Authorized Representative will be completed prior to written acceptance.
- B. Guarantee:

- 1. Trees, shrubs and groundcover shall be guaranteed for a twelve (12) month period after final acceptance. The Contractor shall replace all dead materials as soon as weather permits and upon notification of the Owner. Plants, including trees, which have partially died so that shape, size, or symmetry have been damaged, shall be considered subject to replacement. In such cases, the opinion of the Owner shall be final.
  - a. Plants used for replacement shall be of the same size and kind as those originally planted and shall be planted as originally specified. All work, including materials, labor and equipment used in replacements, shall carry a twelve (12) month guarantee. Any damage, including ruts in lawn or bed areas, incurred as a result of making replacements shall be immediately repaired.
  - b. At the direction of the Owner, plants may be replaced at the start of the next year's planting season. In such cases, dead plants shall be removed from the premises immediately.
  - c. When plant replacements are made, plants, soil mix, fertilizer and mulch are to be utilized as originally specified and re-inspected for full compliance with the contract requirements. All replacements are to be included under "Work" of this section.

- 2. The Owner agrees that for the guarantee to be effective, he will water plants at least twice a week during dry periods and cultivate beds once a month after final acceptance.
- 3. The above guarantee shall not apply where plants die after acceptance because of injury from storms, hail, freeze, insects, diseases, injury by humans, machines or theft.
- 4. Acceptance for all landscape work shall be given after final inspection by the Owner provided the job is in a complete, undamaged condition and there is a stand of grass in all lawn areas. At that time, the Owner will assume maintenance on the accepted work.

- C. Repairs: Any necessary repairs under the Guarantee must be made within ten (10) days after receiving notice, weather permitting. In the event the Landscape Contractor does not make repairs accordingly, the Owner, without further notice to Contractor, may provide materials and men to make such repairs at the expense to the Landscape Contractor.

1.7 QUALITY ASSURANCE

- A. General: Comply with applicable federal, state, county and local regulations governing landscape materials and work.
- B. Personnel: Employ only experienced personnel who are familiar with the required work. Provide full time supervision by a qualified foreman acceptable to Landscape Architect.
- C. Selection of Plant Material:
  - Make contact with suppliers immediately upon obtaining notice of contract acceptance to select and book materials. Develop a program of maintenance (pruning and fertilization) which will ensure the purchased materials will meet and / or exceed project specifications.
  - Substitutions: Do not make plant material substitutions. If the specified landscape material is not obtainable, submit proof of non-availability to Landscape Architect, together with proposal for use of equivalent material. At the time bids are submitted, the Contractor is assumed to have located the materials necessary to complete the job as specified.
  - Landscape Architect will provide a key identifying each tree location on site. Written verification will be required to document material selection, source and delivery schedules to site.
  - Measurements: Measure trees with branches and trunks or canes in their normal position. Do not prune to obtain required sizes. Take caliper measurements six inches above ground for trees up to and including 4" caliper size, and twelve inches above ground for larger sizes. Measure main body of all plant material of height and spread dimensions,

do not measure from branch or root tip-to-tip.

- 5. Owner's Authorized Representative shall inspect all plant material with requirements for genus, species, cultivar / variety size and quality.
- 6. Owner's Authorized Representative retains the right to further inspect all plant material upon arrival to the site and during installation for size and condition of root balls and root systems, limbs, branching habit, insects, injuries and latent defects.
- 7. Owner's Authorized Representative may reject unsatisfactory or defective material at any time during the process work. Remove rejected materials immediately from the site and replace with acceptable material at no additional cost to the Owner. Plants damaged in transit or at job site shall be rejected.

1.8 PRODUCT DELIVERY, STORAGE AND HANDLING

- A. Preparation:
  - Balled and Burlapped (B&B) Plants: Dig and prepare shipment in a manner that will not damage roots, branches, shape and future development.
  - Container Grown Plants: Deliver plants in rigid container to hold ball shape and protect root mass.
- B. Delivery:
  - Deliver packaged materials in sealed containers showing weight, analysis and name of manufacturer. Protect materials from deterioration during delivery and while stored on site.
  - Deliver only plant materials that can be planted in one day unless adequate storage and watering facilities are available on job site.
  - Protect root balls by heeling in with sawdust or other approved moisture retaining material if not planted within 24 hours of delivery.
  - Protect plants during delivery to prevent damage to root balls or desiccation of leaves. Keep plants moist at all times. Cover all materials during transport.
  - Notify Owner's Authorized Representative of delivery schedule 72 hours in advance job site.
  - Remove rejected plant material immediately from job site.
  - To avoid damage or stress, do not lift, move, adjust to plumb, or otherwise manipulate plants by trunk or stems.

PART 2 - PRODUCTS

2.1 PLANTS

- A. General: Well-formed No. 1 grade or better nursery grown stock. Listed plant heights are from tops of root balls to nominal tops of plants. Plant spread refers to nominal outer width of the plant, not to the outer leaf tips. Plants will be individually approved by the Owner's Authorized Representative and his decision as to their acceptability shall be final.
- B. Quantities: The drawings and specifications are complementary. Anything called for on one and not the other is as binding as if shown and called for on both. The plant schedule is an aid to bidders only. Confirm all quantities on plan.
- C. Quality and size: Plant materials shall conform to the size given on the plan, and shall be healthy, symmetrical, well-shaped, full branched and well rooted. The plants shall be free from injurious insects, diseases, injuries to the bark or roots, broken branches, objectionable disfigurements, insect eggs and larvae, and are to be of specimen quality.
- D. Approval: All plants which are found unsuitable in growth, or are in any unhealthy, badly shaped or undersized condition will be rejected by the Owner's Authorized Representative either before or after planting and shall be removed at the expense of the Landscape Contractor and replaced with acceptable plant as

specified at no additional cost to the Owner.

- E. Trees shall be healthy, full-branched, well-shaped, and shall meet the minimum trunk and diameter requirements of the plant schedule. Balls shall be firm, neat, slightly tapered and well wrapped in burlap. Any tree loose in the ball or with a broken root ball at time of planting will be rejected. Balls shall be ten (10") inches in diameter for each one (1") inch of trunk diameter, measured six (6") inches above ball. (Nomenclature confirms to the customary nursery usage. For clarification, the term "multi-trunk" defines a plant having three (3) or more trunks of nearly equal diameter.)
- F. Pruning: All pruning of trees and shrubs, as directed by the Landscape Architect prior to final acceptance, shall be executed by the Landscape Contractor at no additional cost to the Owner.

2.2 SOIL PREPARATION MATERIALS

- A. Sandy Loam:
    - Friable, fertile, dark, loamy soil, free of clay lumps, subsoil, stones and other extraneous material and reasonably free of weeds and foreign grasses. Loam containing Dallisgrass or Nutgrass shall be rejected.
    - Physical properties as follows:
      - a. Clay - between 7-27 percent
      - b. Silt - between 15-25 percent
      - c. Sand - less than 52 percent
    - Organic matter shall be 3%-10% of total dry weight.
    - If requested, Landscape Contractor shall provide a certified soil analysis conducted by an approved soil testing laboratory verifying that sandy loam meets the above requirements.
  - B. Organic Material: Compost with a mixture of 80% vegetative matter and 20% animal waste. Ingredients should be a mix of course and fine textured material.
  - C. Premixed Bedding Soil as supplied by Vital Earth Resources, Gladewater, Texas; Professional Bedding Soil as supplied by Living Earth Technology, Dallas, Texas or Acid Gro Municipal Mix as supplied by Soil Building Systems, Dallas, Texas or approved equal.
  - D. Sharp Sand: Sharp sand must be free of seeds, soil particles and weeds.
  - E. Mulch: Double Shredded Hardwood Mulch, partially decomposed, dark brown. Living Earth Technologies or approved equal.
  - F. Organic Fertilizer: Fertilaid, Sustane, or Green Sense or equal as recommended for required applications. Fertilizer shall be delivered to the site in original unopened containers, each bearing the manufacturer's guaranteed statement of analysis.
  - G. Commercial Fertilizer: 10-20-10 or similar analysis. Nitrogen source to be a minimum 50% slow release organic Nitrogen (SCU or UP) with a minimum 8% sulfur and 4% iron, plus micronutrients.
  - H. Peat: Commercial sphagnum peat moss or partially decomposed shredded pine bark or other approved organic material.
- 2.3 MISCELLANEOUS MATERIALS
- A. Steel Edging: All steel edging shall be 3/16" thick x 4" deep x 18' long with 6 stakes per section, painted black at the factory as manufactured by The J.D. Russell Company and under its trade name DURAEEDGE Heavy Duty Steel.
  - B. Staking Material for Shade Trees: refer to details.
  - C. Gravel: Washed native pea gravel, graded 1 inch to 1-1/2 inch.
  - D. Filter Fabric: 'Mirafi Mirascape' by Mirafi Construction Products available at Lone Star Products, Inc., (469) 523-0444 or approved equal.
  - E. River Rock: 'Colorado' or native river rock, 2" - 4" dia.

- F. Decomposed Granite: Base material shall consist of a natural material mix of granite aggregate not to exceed 1/8" diameter in size and shall be composed of various stages of decomposed earth base.

PART 3 - EXECUTION

3.1 BED PREPARATION & FERTILIZATION

- A. Landscape Contractor to inspect all existing conditions and report any deficiencies to the Owner.
- B. All planting areas shall be conditioned as follows:
  - Prepare new planting beds by scraping away existing grass and weeds as necessary. Till existing soil to a depth of six (6") inches prior to placing compost and fertilizer. Apply fertilizer as per Manufacturer's recommendations. Add six (6") inches of compost and till into a depth of six (6") inches of the topsoil. Apply organic fertilizer such as Sustane or Green Sense at the rate of twenty (20) pounds per one thousand (1,000) square feet.
  - All planting areas shall receive a two (2") inch layer of specified mulch.
  - Backfill for tree pits shall be as follows: Use existing top soil on site (use imported topsoil as needed) free from large clumps, rocks, debris, caliche, subsoils, etc., placed in nine (9") inch layers and watered in thoroughly.
- C. Grass Areas:
  - Blocks of sod should be laid joint to joint (staggered joints) after fertilizing the ground first. Roll grass areas to achieve a smooth, even surface. The joints between the blocks of sod should be filled with topsoil where they are evidently gaped open, then watered thoroughly.

3.2 INSTALLATION

- A. Maintenance of plant materials shall begin immediately after each plant is delivered to the site and shall continue until all construction has been satisfactorily accomplished.
- B. Plant materials shall be delivered to the site only after the beds are prepared and areas are ready for planting. All shipments of nursery materials shall be thoroughly protected from the drying winds during transit. All plants which cannot be planted at once, after delivery to the site, shall be well protected against the possibility of drying by wind and Balls of earth of B & B plants shall be kept covered with soil or other acceptable material. All plants remain the property of the Contractor until final acceptance.
- C. Position the trees and shrubs in their intended location as per plan.
- D. Notify the Owner's Authorized Representative for inspection and approval of all positioning of plant materials.
- E. Excavate pits with vertical sides and horizontal bottom. Tree pits shall be large enough to permit handling and planting without injury to balls of earth or roots and shall be of such depth that, when planted and settled, the crown of the plant shall bear the same relationship to the finish grade as it did to soil surface in original place of growth.
- F. Shrub and tree pits shall be no less than twenty-four (24") inches wider than the lateral dimension of the earth ball and six (6") inches deeper than its vertical dimension. Remove and haul from site all rocks and stones over three-quarter (3/4") inch in diameter. Plants should be thoroughly moist before removing containers.
- G. Dig a wide, rough sided hole exactly the same depth as the height of the ball, especially at the surface of the ground. The sides of the hole should be rough and jagged, never slick or glazed.
- H. Percolation Test: Fill the hole with water. If the water level does not percolate within 24 hours, the tree needs to move to another location or have drainage added. Install a PVC stand pipe per

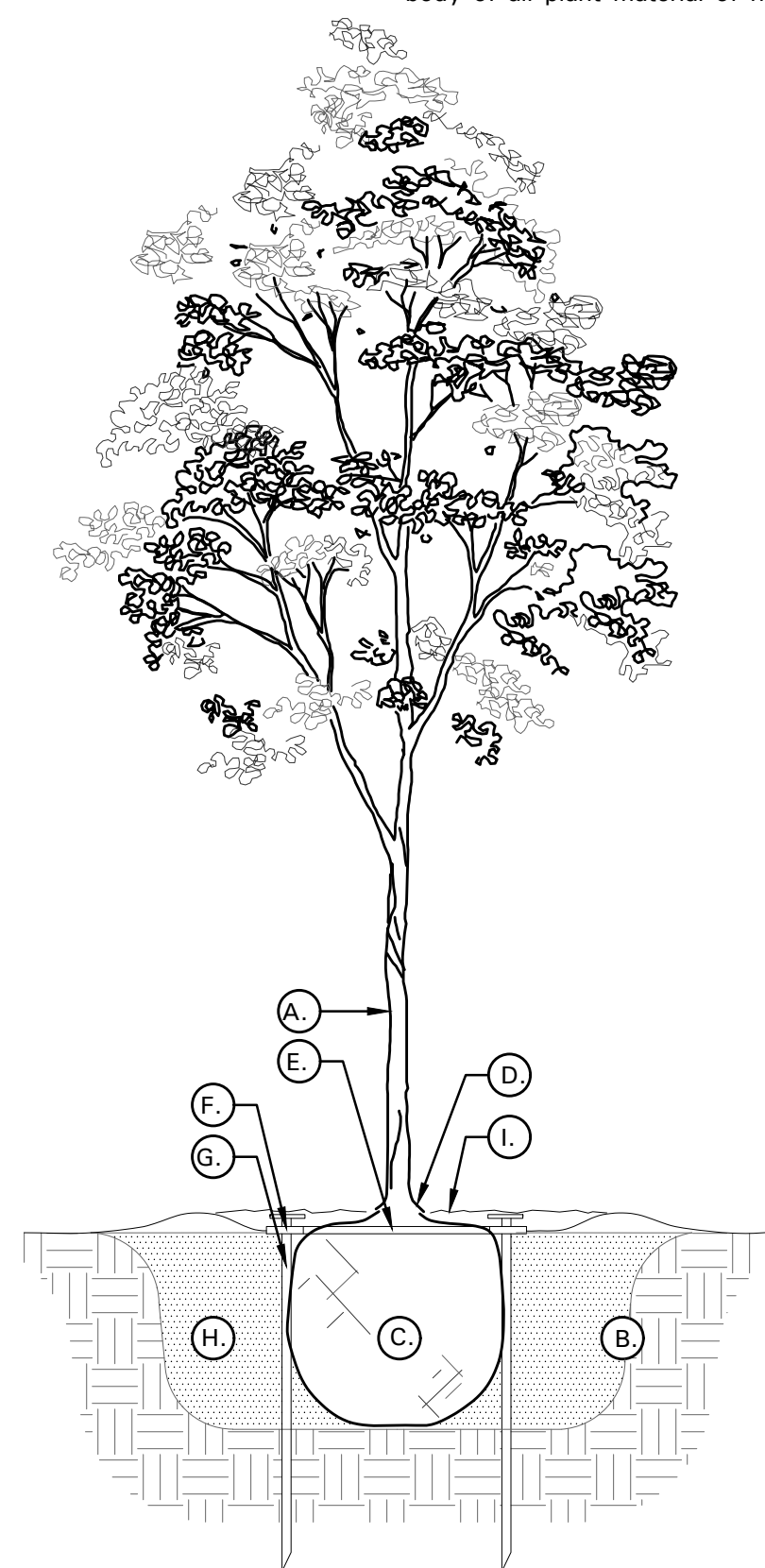
tree planting detail as approved by the Landscape Architect if the percolation test fails.

- I. Backfill only with 5 parts existing soil or sandy loam and 1 part bed preparation. When the hole is dug in solid rock, topsoil from the same area should not be used. Carefully settle by watering to prevent air pockets. Remove the burlap from the top 1/2 of the ball, as well as all nylon, plastic string and wire. Container trees will usually be root bound, if so follow standard nursery practice of "root scoring".
- J. Do not wrap trees.
- K. Do not over prune.
- L. Munch the top of the ball. Do not plant grass all the way to the trunk of the tree. Leave the area above the top of the ball and mulch with at least two (2") inches of specified mulch.
- M. All plant beds and trees to be mulched with a minimum settled thickness of two (2") inches over the entire bed or pit.
- N. Obstruction below ground: In the event that rock, or underground construction work or obstructions are encountered in any plant pit excavation work to be done under this section, alternate locations may be selected by the Owner. Where locations cannot be changed, the obstructions shall be removed to a depth of not less than three (3') feet below grade and no less than six (6") inches below the bottom of ball when plant is properly set at the required grade. The work of this section shall include the removal from the site of such rock or underground obstructions encountered at the cost of the Landscape Contractor.
- O. Trees and large shrubs shall be staked as site conditions require. Position stakes to secure trees against seasonal prevailing winds.
- P. Pruning and Mulching: Pruning shall be directed by the Landscape Architect and shall be pruned in accordance with standard horticultural practice following Fine Pruning, Class I pruning standards provided by the National Arborist Association.
  - Dead wood, suckers, broken and badly bruised branches shall be removed. General tipping of the branches is not permitted. Do not cut terminal branches.
  - Pruning shall be done with clean, sharp tools.
  - Immediately after planting operations are completed, all tree pits shall be covered with a layer of organic material two (2") inches in depth. This limit of the organic material for trees shall be the diameter of the plant pit.
- Q. Steel Curbing Installation:
  - Curbing shall be aligned as indicated on plans. Stake out limits of steel curbing and obtain Owners approval prior to installation.
  - All steel curbing shall be free of kinks and abrupt bends.
  - Top of curbing shall be 1/2" maximum height above final finished grade.
  - Stakes are to be installed on the planting bed side of the curbing, as opposed to the grass side.
  - Do not install steel edging along sidewalks or curbs.
  - Cut steel edging at 45 degree angle where edging meets sidewalks or curbs.

3.3 CLEANUP AND ACCEPTANCE

- A. Cleanup: During the work, the premises shall be kept neat and orderly at all times. Storage areas for all materials shall be so organized so that they, too, are neat and orderly. All trash and debris shall be removed from the site as work progresses. Keep paved areas clean by sweeping or hosing them at end of each work day.

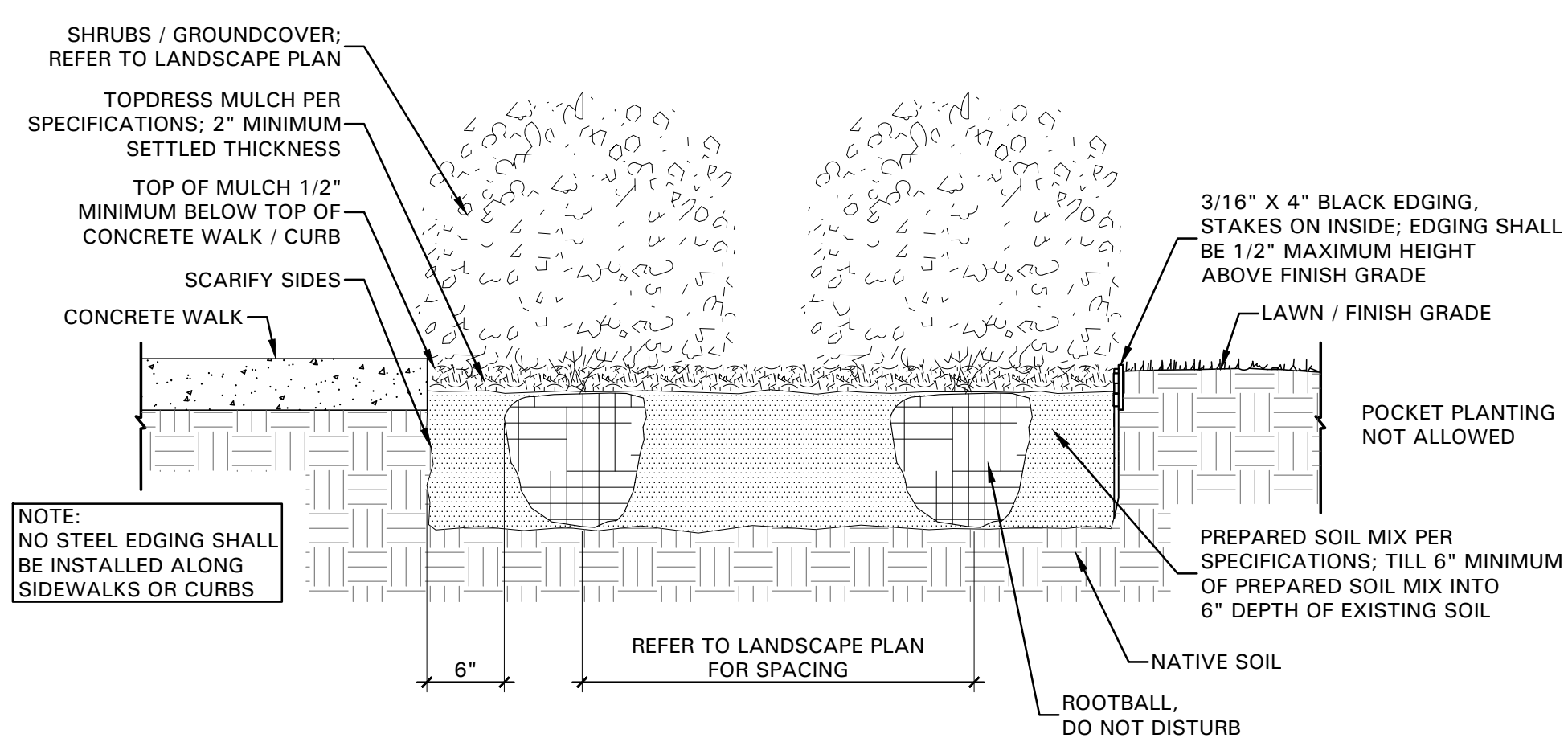
END OF SECTION



01 TREE PLANTING DETAIL NOT TO SCALE

TREE PLANTING DETAIL LEGEND AND NOTES

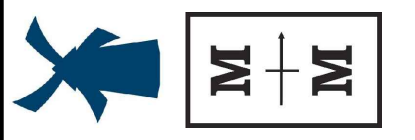
- A. TREE: TREES SHALL CONFORM WITH LATEST AMERICAN STANDARD FOR NURSERY STOCK. www.anla.org
- B. TREE PIT: WIDTH TO BE AT LEAST TWO (2) TIMES THE DIAMETER OF THE ROOT BALL CENTER TREE IN HOLE & REST ROOT BALL ON UNDISTURBED NATIVE SOIL.
- C. ROOT BALL: REMOVE TOP 1/2 BURLAP AND ANY OTHER FOREIGN OBJECT; CONTAINER GROWN STOCK TO BE INSPECTED FOR GIRDLING ROOTS.
- D. ROOT FLARE: ENSURE THAT ROOT FLARE IS EXPOSED, FREE FROM MULCH, AND AT LEAST TWO INCHES ABOVE GRADE. TREES SHALL BE REJECTED WHEN GIRDLING ROOTS ARE PRESENT & ROOT FLARE IS NOT APPARENT.
- E. ROOTBALL ANCHOR RING: REFER TO MANUFACTURER'S GUIDELINES FOR SIZING. PLACE ROOTBALL ANCHOR RING ON BASE OF ROOTBALL, TRUNK SHOULD BE IN THE CENTER OF THE RING.
- F. ROOT ANCHOR BY TREE STAKE SOLUTIONS.
- G. NAIL STAKE: REFER TO MANUFACTURER'S GUIDELINES FOR SIZING. INSTALL NAIL STAKES WITH HAMMER OR Mallet FIRMLY INTO UNDISTURBED GROUND. DRIVE NAIL STAKES FLUSH WITH "U" BRACKET ADJACENT TO ROOTBALL (DO NOT DISTURB ROOTBALL).
- H. BACKFILL: USE EXISTING NATIVE SOIL (no amendments) WATER THOROUGHLY TO ELIMINATE AIR POCKETS.
- I. MULCH: DOUBLE SHREDDED HARDWOOD MULCH 2 INCH SETTLED THICKNESS, WITH 2" HT. WATERING RING; ENSURE THAT ROOT FLARE IS EXPOSED. BELOW GROUND STAKE SHOULD NOT BE VISIBLE.
- J. TREE STAKES: TREE STAKE SOLUTIONS 'SAFETY STAKE' BELOW GROUND MODEL AVAILABLE FROM: Tree Stake Solutions ATTN: Jeff Tutley (903) 676-6143 jft@treestakesolutions.com www.treestakesolutions.com OR APPROVED EQUAL. TREES SHALL BE STAKED BELOW GROUND WHERE NECESSARY; ABOVE GROUND STAKING IS EXPRESSLY PROHIBITED.
- K. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO OBTAIN A COPY OF THE MANUFACTURER'S SPECIFICATIONS PRIOR TO INSTALLATION OF TREE STAKES. CONTRACTOR SHALL ADHERE TO MANUFACTURER'S INSTALLATION GUIDELINES, SPECIFICATIONS, AND OTHER REQUIREMENTS FOR TREE STAKE INSTALLATION.



02 SHRUB / GROUNDCOVER DETAIL NOT TO SCALE

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 DRAWN: RMT  
 DESIGNED: RMT  
 CHECKED/STAMPED:  
 STAMP: 11/16/22  
 DESIGNER: FRM #221895  
 PROJECT/CLIENT: Dutch Bros No.: TX0306 West Villa Maria Road, Bryan, TX 77807  
 MAIN & MAIN CAPITAL GROUP, LLC 5750 Genesis Ct, Suite 103, Frisco, Texas 75034 tel 214-308-0008  
 SHEET TITLE: LANDSCAPE SPECIFICATIONS AND DETAILS  
 SHEET: L1.02  
 SUBMITTAL RECORD: # 22122  
 DATE: 10/12/22 SUBMITTAL  
 11/16/22 SITE PLAN REVIEW  
 BELLE FIRMA 4245 North Central Expy Suite 501 Dallas, Texas 75205 214.865.7192 office





SUBMITTAL RECORD:


**SLEEVING NOTES**

- SLEEVES SHALL BE FURNISHED AND INSTALLED BY GENERAL CONTRACTOR.
- SLEEVE MATERIAL SHALL BE SCHEDULE 40 PIPE, SIZE AS INDICATED ON PLAN.
- CONTRACTOR SHALL LAY SLEEVES AND CONDUITS AT TWENTY-FOUR (24) INCHES BELOW FINISH GRADE OF THE TOP OF PAVEMENT.
- CONTRACTOR SHALL EXTEND SLEEVES ONE (1) FOOT BEYOND EDGE OF ALL PAVEMENT.
- CONTRACTOR SHALL CAP PIPE ENDS USING PVC CAPS.
- CONTRACTOR SHALL FURNISH OWNER AND IRRIGATION CONTRACTOR WITH AN 'AS-BUILT' DRAWING SHOWING ALL SLEEVE LOCATIONS.

**IRRIGATION NOTES**

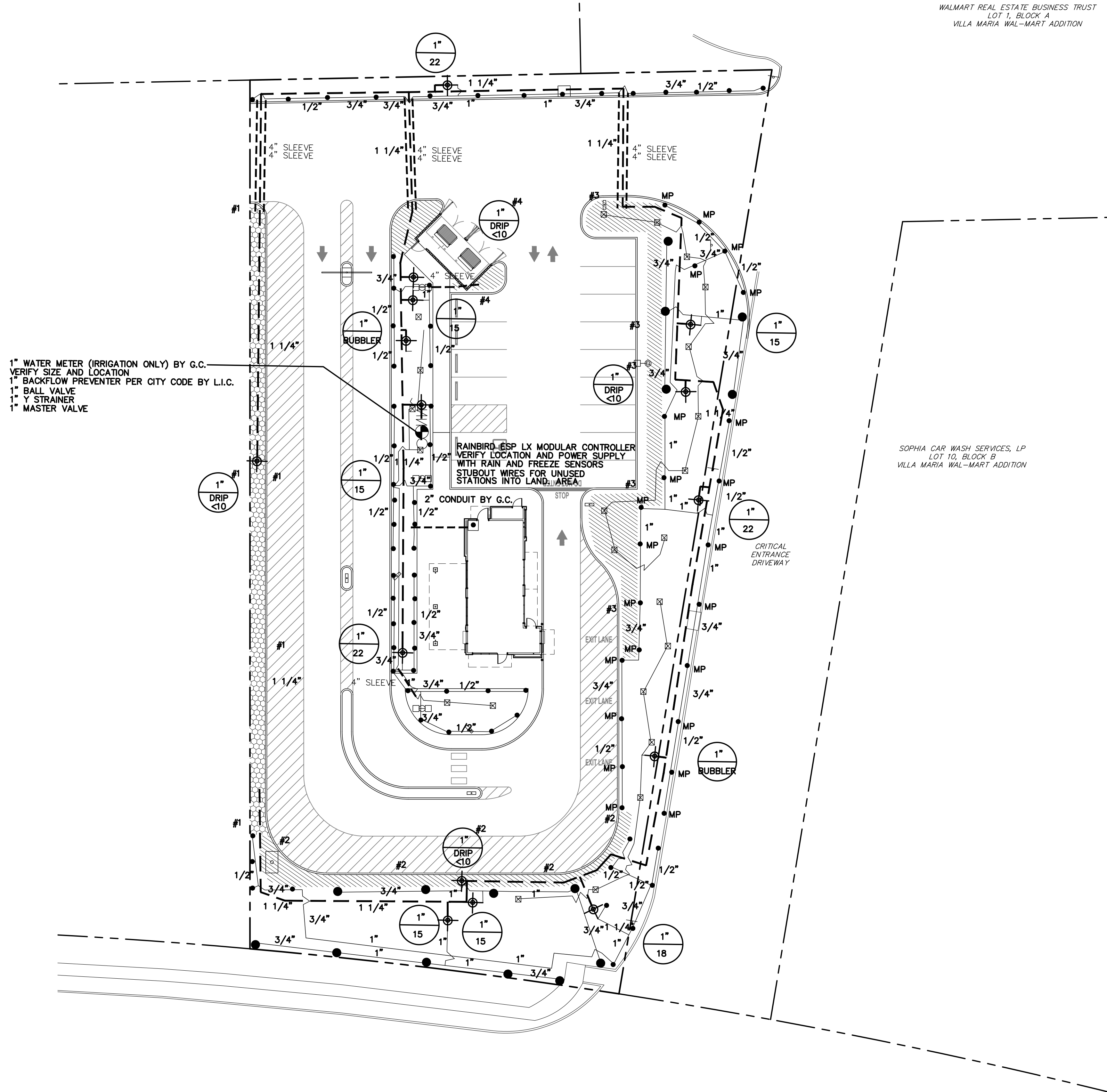
- THE IRRIGATION CONTRACTOR SHALL COORDINATE INSTALLATION OF THE IRRIGATION SYSTEM WITH THE LANDSCAPE CONTRACTOR SO THAT ALL PLANT MATERIAL WILL BE WATERED IN ACCORDANCE WITH THE INTENT OF THE PLANS AND SPECIFICATIONS.
- ALL SPRINKLER EQUIPMENT NUMBERS REFERENCE THE RAINBIRD EQUIPMENT CATALOG UNLESS OTHERWISE INDICATED.
- TEN DAYS PRIOR TO START OF CONSTRUCTION, IRRIGATION CONTRACTOR SHALL VERIFY STATIC WATER PRESSURE. IF STATIC PRESSURE IS LESS THAN 65 P.S.I., NOTIFY THE LANDSCAPE ARCHITECT IMMEDIATELY. DO NOT WORK UNTIL NOTIFIED TO DO SO BY OWNER.
- SLEEVES SHALL BE FURNISHED AND INSTALLED BY GENERAL CONTRACTOR. SLEEVE MATERIAL SHALL BE SCHEDULE 40, SIZE AS INDICATED ON PLAN. REFER TO SLEEVING NOTES.
- ALL MAIN LINE AND LATERAL LINE PIPING IN PLANTING AND LAWN AREAS SHALL HAVE A MINIMUM OF 12 INCHES OF COVER. ALL PIPING UNDER PAVING SHALL HAVE A MINIMUM OF 18 INCHES OF COVER. CONTRACTOR TO VERIFY LOCAL FREEZE DEPTHS AND ADJUST DEPTH OF COVER ACCORDINGLY.
- LAWN SPRAY HEADS SHALL BE RAINBIRD 1804 INSTALLED PER DETAIL SHOWN.
- ROTOR HEADS SHALL BE RAINBIRD 5000 INSTALLED PER DETAIL SHOWN. (WITH BUILT-IN CHECK VALVE)
- NOZZLES SHALL BE RAINBIRD PLASTIC, UNLESS OTHERWISE NOTED. IRRIGATION CONTRACTOR SHALL SELECT THE PROPER ARC AND RADIUS FOR EACH NOZZLE TO ENSURE 100% AND PROPER COVERAGE OF ALL LAWN AREAS AND PLANT MATERIAL. NO WATER SHALL SPRAY ON BUILDING.
- ALL NOZZLES IN PARKING LOT ISLANDS AND PLANTING BEDS SHALL BE LOW ANGLE NOZZLES TO MINIMIZE OVER SPRAY ON PAVEMENT SURFACES.
- ELECTRIC CONTROL VALVES SHALL BE RAINBIRD PEB INSTALLED PER DETAIL SHOWN. SIZE OF VALVES AS SHOWN ON PLAN. VALVES SHALL BE INSTALLED IN VALVE BOXES LARGE ENOUGH TO PERMIT MANUAL OPERATION, REMOVAL OF SOLENOID AND / OR VALVE COVER WITHOUT ANY EARTH EXCAVATION.
- ALL 24 VOLT VALVE WIRING TO BE UF 14 GAUGE SINGLE CONDUCTOR. ALL WIRE SPLICES ARE TO BE PERMANENT AND WATERPROOF.
- AUTOMATIC CONTROLLER SHALL BE INSTALLED AT LOCATION SHOWN. POWER (120V) SHALL BE LOCATED IN A JUNCTION BOX WITHIN FIVE (5) FEET OF CONTROLLER, LOCATION BY OTHER TRADES. RAIN AND FREEZE SENSORS SHALL BE INSTALLED WITH EACH CONTROLLER.
- THE DESIGN PRESSURE IS 65 PSI.
- ELECTRICAL SPLICES AT EACH VALVE AND CONTROLLER ONLY.
- IRRIGATION IN TEXAS IS REGULATED BY: THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY (TCEQ) MC-178 / PO BOX 13087 AUSTIN, TEXAS 78711-3087
- TCEO'S WEBSITE IS WWW.TCEQ.STATE.TX.US.

**IRRIGATION LEGEND**

- RAINBIRD 1804 POP-UP LAWN HEAD
- MP HUNTER MP ROTATOR NOZZLE
- RAINBIRD 5000 ROTARY FC
- RAINBIRD 5000 ROTARY PC
- ⊗ RAINBIRD BUBBLER (2 PER TREE, TYP.)
- ⊕ RAINBIRD PEB SERIES ELECTRIC VALVE
- CONTROLLER, SIZE AS INDICATED
- SERVICE CONNECTION, SIZE AS INDICATED WITH D.C.A., SIZE AS INDICATED
- PVC SCHEDULE 40 SLEEVING
- PVC CLASS 200 MAINLINE
- PVC CLASS 200 LATERAL LINE
- VALVE SIZE
- GPM
- ▨ NETAFIM TECHLINE#TLDL6-1210 (18" LATERAL SPACING, 12" EMITTER SPACING) PVC LATERAL PIPING SIZED AS REQUIRED INSTALL ALL EQUIPMENT ACCORDING TO MANUFACTURERS SPECIFICATIONS
- ▨ NETAFIM TECHLINE#TLDL6-1210 (18" LATERAL SPACING, 12" EMITTER SPACING) PVC LATERAL PIPING SIZED AS REQUIRED INSTALL ALL EQUIPMENT ACCORDING TO MANUFACTURERS SPECIFICATIONS
- NETAFIM DISC FILTER #DF100-080
- NETAFIM PRESSURE REGULATOR #PRV15025
- INSTALL ALL EQUIPMENT ACCORDING TO MANUFACTURERS SPECIFICATIONS

**BUBBLER PIPING CHART**

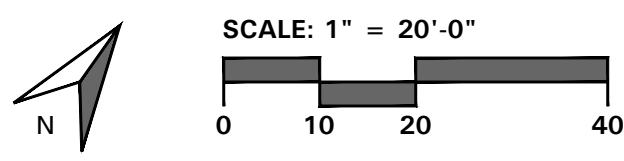
NUMBER OF BUBBLERS	SIZE OF PIPE
1 - 5	1/2"
6 - 10	3/4"
11 - 20	1"
21 - 30	1 1/4"
31 - 40	1 1/2"



- 1" WATER METER (IRRIGATION ONLY) BY G.C. VERIFY SIZE AND LOCATION
- 1" BACKFLOW PREVENTER PER CITY CODE BY L.I.C.
- 1" BALL VALVE
- 1" Y STRAINER
- 1" MASTER VALVE

WEST VILLA MARIA ROAD

SOPHIA CAR WASH SERVICES, LP  
 LOT 10, BLOCK B  
 VILLA MARIA WAL-MART ADDITION



- 4245 North Central Expy
- Suite 501
- Dallas, Texas 75205
- 214.865.7192 office



**SECTION 32 8423 - UNDERGROUND IRRIGATION SLEEVES AND UTILITY CONDUITS**

**PART 1 - GENERAL**

**1.1 DESCRIPTION**

- A. Provide underground irrigation sleeves as indicated on the drawings.

**1.2 RELATED WORK SPECIFIED ELSEWHERE**

- A. Section 32 8424 - Irrigation System

**1.3 REFERENCED STANDARDS**

- A. American Society for Testing and Materials:
  1. ASTM - D2441 Poly (Vinyl Chloride) (PVC) Plastic Pipe (SD R-PR)
  2. ASTM - D2466 Poly (Vinyl Chloride) (PVC) Plastic Pipe Fittings, Socket Type, Schedule 40.
  3. ASTM - D2564 Solvent Cements for Poly Vinyl Chloride Plastic Pipe and Fittings.

**PART 2 - MATERIALS**

**2.1 DEFINITIONS**

- A. Sleeve - A pipe within which another pipe is placed for carrying water or other utilities to be installed.
- B. Wire Sleeves - A pipe used to carry low voltage irrigation wires for operation of the electric solenoid valves.

**2.2 GENERAL**

- A. Polyvinyl Chloride Pipe (PVC) - Manufactured in accordance with standards noted herein:
  1. Marking and Identification - Permanently marked with SDR number, ASTM standard number, and the NSF (National Sanitation Foundation) seal.
  2. Solvent - As recommended by manufacturer to make solvent-welded joints. Thoroughly clean pipe and fittings before applying solvent.

**PART 3 - EXECUTION**

**3.1 INSTALLATION**

- A. Coverage - Provide twenty-four inches (24") minimum cover over top of sleeve from finish grade.
- B. Sleeve Extensions - Extend sleeves one foot (1') past edge of pavement or concrete walls. Install 90 degree elbow on each sleeve end and add additional length of same size pipe to extend above finish grade by twelve inches (12"). Cap pipe ends using duct tape.

**3.2 BACKFILL**

- A. Compaction - Place backfill over sleeves in six (6") inch lifts. Tamp firmly into place taking care not to damage sleeve. Complete backfill and compaction to prevent any future settlement. Compact to 85% Standard Proctor.
- B. Damage - Repair any damage resulting from improper compaction including pavement repair and replacement.

**END OF SECTION**

**SECTION 32 8424 - IRRIGATION SYSTEM**

**PART 1 - GENERAL**

**1.1 SCOPE**

- A. Provide complete sprinkler installation as detailed and specified herein, includes furnishing all labor, material, tools, equipment, and related items for the complete and proper

installation of the irrigation system as indicated by the Drawings. All costs associated with this installation, including fees for testing and inspections of the system components are the responsibility of the installer of this irrigation system.

**B. Work includes but is not limited to:**

1. Trenching and backfill.
2. Installation of automatic controlled system.
3. Upon completion of installation, supply as-built drawings showing details of construction including location of mainline piping, manual and automatic valves, electrical supply to valves, and specifically the exact location of automatic valves.

- C. All sleeves as shown on plans shall be furnished by General Contractor. Meter and power source shall be provided by General Contractor.

**1.2 RELATED WORK SPECIFIED ELSEWHERE**

- A. Refer to Irrigation Plans for controller, head, and valve locations.
- B. Section 32 8423 - Underground Irrigation Sleeves and Utility Conduits
- C. Section 32 9300 - Landscape
- D. Refer to Landscape Plans, notes, details, bidding requirements, special provisions, and schedules for additional requirements.

**1.3 APPLICABLE STANDARDS**

- A. America Standard for Testing and Materials (ASTM) - Latest edition.
  1. D2241 Poly (Vinyl Chloride) (PVC) Plastic Pipe (SDR-PR)
  2. D2464 Poly (Vinyl Chloride) (PVC) Plastic Pipe Fittings, Thread, Schedule 80
  3. D2455 Poly (Vinyl Chloride) (PVC) Plastic Pipe Fittings, Schedule 40
  4. D2467 Poly (Vinyl Chloride) (PVC) Plastic Pipe Fittings, Socket Type, Schedule 80
  5. D2564 Solvent Cements for Poly (Vinyl Chloride) (PVC) Plastic Pipe and Fittings
  6. D2287 Flexible Poly Vinyl Chloride (PVC) Plastic Pipe
  7. F656 Poly Vinyl Chloride (PVC) Solvent Weld Primer
  8. D2855 Making Solvent - Cemented Joints with Poly (Vinyl Chloride) (PVC) Pipe and Fittings

**1.4 MAINTENANCE AND GUARANTEE**

- A. The Contractor shall guarantee materials and workmanship for one (1) calendar year after final acceptance by Owner.
- B. Guarantee is limited to repair and replacement of defective materials or workmanship, including repair of backfill settlement.
- C. Provide maintenance of system, including raising and lowering of heads to compensate for lawn growth, cleaning and adjustment of heads, and raising and lowering of shrub heads to compensate for shrub growth for one (1) year after completion of installation.

**1.5 SUBMITTALS**

- A. Procedure: Comply with Division I requirements.
- B. Product Data: The Contractor shall submit five (5) copies of equipment manufacturer's cut sheets and shop drawings for approval by Owner Authorized Representative prior to installation, including, but not limited to the following: sprinkler head, pipe, controller, valves, backflow prevention devices, valve boxes, wire, conduit, fittings, and all other types of fixtures proposed to be installed on the job. The submittal shall include the manufacturer's name, model number, equipment capacity, and manufacturer's installation recommendations, if applicable, for each proposed item.
- C. No work covered under this section may begin until the

Contractor has submitted the required information. No partial submittal shall be accepted and submittals shall be neatly bound into a brochure and logically organized. After the submittal has been approved, substitutions will not be allowed, except by written consent by the Owner Authorized Representative.

- D. Shop drawings include dimensions, elevations, construction details, arrangements, and capacity equipment, as well as manufacturer's installation recommendations.

**E. Operating and Maintenance Manuals:**

1. Provide three (3) individually bound manuals detailing operating and maintenance requirements for the irrigation system.
2. Manuals shall be delivered to the Owner Authorized Representative no later than ten (10) days prior to completion of the irrigation system.
3. Provide descriptions of all installed materials and systems in sufficient detail to permit maintenance personnel to understand, operate, and maintain the equipment.
4. Provide the following in each manual:
  - a. Index sheet with Contractor's name, address, telephone number, and contact name.
  - b. Duration of warranty period. Include warranties and guarantees extended to the Owner by the manufacturer of all equipment.
  - c. Equipment list providing the following for each item:
    - 1) Manufacturer's name
    - 2) Make and model number
    - 3) Name and address of local part's representative
    - 4) Spare parts list in detail
    - 5) Details operating and maintenance instructions for major equipment.

**F. Project Record Documents:**

1. Comply with Division I requirements.
  2. Locate by written dimension, routing of mainline piping, remote control valves, and quick coupling valves. Locate mainlines by single dimensions from permanent site features provided they run parallel to these elements. Locate valves, intermediate electrical connections, and quick couplers by two dimensions from a permanent site feature at approximately 70 degrees to each other.
  3. When dimensioning is complete, transpose work to bond paper.
  4. Submit three (3) copies of the completed as-built drawings, along with a CD with PDF files of the same, to the Owner Authorized Representative prior to final acceptance of the work. Mark drawings "Record Prints Showing Significant Changes". Date and sign drawings.
- G. Quick Coupler Keys: Provide three (3) coupler keys with boiler drains attached using brass reducer.
  - H. Controller Keys: Provide three (3) sets of keys to controller enclosure(s).
  - I. Use of materials differing in quality, size, or performance from those specified shall only be allowed upon written approval of the Landscape Architect. The decision shall be based on comparative ability of material or article to perform fully all purposes of mechanics and general design considered to be possessed by item specified.
  - J. Bidders desiring to make a substitution for specified sprinklers shall submit manufacturer's catalog sheet showing full specification of each type sprinkler proposed as a substitute, including discharge in GPM maximum allowable operating pressure at sprinkler.
  - K. Approval of substitute sprinkler shall not relieve Irrigation Contractor of his responsibility to demonstrate that final installed sprinkler system shall operate according to intent of originally designed and specified system.
  - L. It is the responsibility of the Irrigation Contractor to demonstrate that final installed sprinkler system shall operate according to intent of originally designed and specified system. If Irrigation Contractor notes any problems in head spacing or potential coverage, it is his responsibility to notify the Landscape Architect in writing, before proceeding with

work. Irrigation Contractor guarantees 100% coverage of all areas to be irrigated.

**1.6 TESTING**

- A. Perform testing required with other trades, including earthwork, paving, plumbing, electrical, etc., to avoid unnecessary cutting, patching, and boring.
- B. Water Pressure: This irrigation system has been designed to operate with a minimum static water pressure indicated on Drawings. The Contractor shall take a pressure reading at each water meter prior to beginning construction. Confirm findings to Owner Authorized Representative in writing. If static pressure varies from pressure stated on drawings, do not start work until notified to do so by Owner Authorized Representative.

**1.7 COORDINATION**

- A. Coordinate installation with other trades, including earthwork, paving, and plumbing to avoid unnecessary cutting, patching and boring.
- B. Coordinate to ensure that electrical power source is in place.
- C. Coordinate system installation with work specified in other sections and coordinate with Landscape Contractor to ensure plant material is uniformly watered in accordance with intent shown on drawings.

**PART 2 - PRODUCTS**

**2.1 GENERAL**

- A. Mainline: Mainlines are the piping from water source to operating valves. This portion of piping is subject to surges, being a closed portion of sprinkler system. Hydrant lines are considered a part of sprinkler main.
- B. Lateral Piping: Lateral piping is that portion of piping from operating valve to sprinkler heads. This portion of piping is not subject to surges, being an "open end" portion of sprinkler system.

**2.2 POLY VINYL CHLORIDE PIPE (PVC PIPE)**

- A. PVC pipe shall be manufactured in accordance with commercial standards noted herein.
- B. Marking and Identification: PVC pipe shall be continuously and permanently marked with the following information: manufacturer's name, pipe size, type of pipe, and material, SDR number, product standard number, and the NSF (National Sanitation Foundation) seal.
- C. PVC Pipe Fittings: Shall be of the same material as the PVC pipe specified and shall be compatible with PVC pipe furnished.

**2.3 COPPER TUBING**

- A. Hard, straight lengths of domestic manufacture only. Do not use copper tube of foreign extrusion or any so-called irrigation tubing (thin wall).

**2.4 COPPER TUBE FITTINGS**

- A. Cast brass or wrought copper, sweat - solder type.

**2.5 WIRE**

- A. Type UF with 4/64" thick waterproof insulation which is Underwriter's Laboratory approved for direct underground burial when used in a National Electric Code Class II Circuit (30 volts AC or less).
- B. Wire Connectors: Waterproof splice kit connectors. Type DBY by 3M.

**2.6 SCHEDULE 80 PVC NIPPLES**

- A. Composed of Standard Schedule 40 PVC Fittings and PVC

meeting noted standards. No clamps or wires may be used. Nipples for heads and shrub risers to be nominal one-half inch (1/2") diameter by eight (8") inches long, where applicable.

- B. Polyethylene nipples six (6") inches long shall be used on all pop-up spray heads.

**2.7 MATERIALS - SEE IRRIGATION PLAN**

- A. Sprinkler heads in lawn area as specified on plan.
- B. PVC Pipe: Class 200, SDR 21
- C. Copper Tubing (City Connection): Type "M"
- D. 24V Wire: Size 14, Type UF
- E. Electric valves: Shall be all plastic construction as indicated on plans.
- F. Backflow Prevention Device: Refer to drawing requirements and flow valve. Coordinate exact location with General Contractor.

**PART 3 - EXECUTION**

**3.1 INSTALLATION - GENERAL**

- A. Staking: Before installation is started, place a stake where each sprinkler is to be located, in accordance with drawing. Staking shall be approved by Owner Authorized Representative before proceeding with work.
- B. Excavations: Excavations are unclassified and include earth, loose rock, rock or any combination thereof, in wet or dry state. Backfill trenches with material removed, provided that the earth is suitable for compaction and contains no lumps, clods rock, debris, etc. Special backfill specifications, if furnished take preference over this general specification.
- C. Backfill: Flood or hand-tamp to prevent after settling. Hand rake trenches and adjoining area to leave grade in as good or better condition than before installation.
- D. Piping Layout: Piping layout is diagrammatic. Route piping around trees and shrubs in such a manner as to avoid damage to plantings. Do not dig within ball of newly planted trees or shrubs. In areas where existing trees are present, trenches shall be adjusted on-site to provide a minimum clearance of four (4) feet between the drip line of any tree or trench. The Contractor shall notify the Owner Authorized Representative in writing of a planned change in trench routing from that shown on the drawings.

**3.2 PIPE INSTALLATION**

- A. Sprinkler Mains: Install a four (4") inch wide minimum trench with a minimum of eighteen (18") inches of cover.
- B. Lateral Piping: Install a four (4") inch wide minimum trench deep enough to allow for installation of sprinkler heads and valves, but in no case, with less than twelve (12") of cover.
- C. Trenching: Remove lumber, rubbish, and large rocks from trenches. Provide firm, uniform bearing for entire length of each pipe line to prevent uneven settlement. Wedging or blocking of pipe shall not be permitted. Remove foreign matter or dirt from inside of pipe before welding, and keep piping clean by approved means during and after laying of pipe.

**3.3 PVC PIPE AND FITTING ASSEMBLY**

- A. Solvent: Use only solvent recommended by manufacturer to make solvent-welded joints. Thoroughly clean pipe and fittings of dirt, dust and moisture before applying solvent.
- B. PVC to metal connection: Work metal connections first. Use a non-hardening pipe dope such as Permatex No. 2 on threaded PVC adapters into which pipe may be welded.

**3.4 COPPER TUBING AND FITTING ASSEMBLY**

- A. Clean pipe and fitting thoroughly and lightly sand pipe connections to remove residue from pipe. Attach fittings to tubing in an approved manner using 50-50 soft solid core solder.

**3.5 POP-UP SPRAY HEADS**

- A. Supply pop-up spray heads in accordance with materials list and plan. Attach sprinkler to lateral piping with a semi-flexible polyethylene nipple not less than three (3") inches or more than six (6") inches long.

**3.6 VALVES**

- A. Supply valves in accordance with materials list and sized according to drawings. Install valves in a level position in accordance with manufacturer's specifications. See plan for typical installation of electric valve and valve box.

**3.7 WIRING**

- A. Supply wire from the automatic sprinkler controls to the valves. No conduit will be required for UF wire unless otherwise noted on the plan. Wire shall be tucked under the piping.
- B. A separate wire is required from the control to each electric valve. A common neutral wire is also required from each control to each of the valves served by each particular control.
- C. Bundle multiple wires and tape them together at ten (10') foot intervals. Install ten (10") inch expansion coils at not more than one hundred (100') foot intervals. Make splices waterproof.

**3.8 AUTOMATIC SPRINKLER CONTROLS**

- A. Supply in accordance with Irrigation Plan. Install according to manufacturer's recommendations.

**3.9 TESTING**

- A. Sprinkler Mains: Test sprinkler main only for a period of twelve (12) to fourteen (14) hours under normal pressure. If leaks occur, replace joint or joints and repeat test.
- B. Complete tests prior to backfilling. Sufficient backfill material may be placed in trenches between fittings to ensure stability of line under pressure. In each case, leave fittings and couplings open to visual inspection for full period of test.

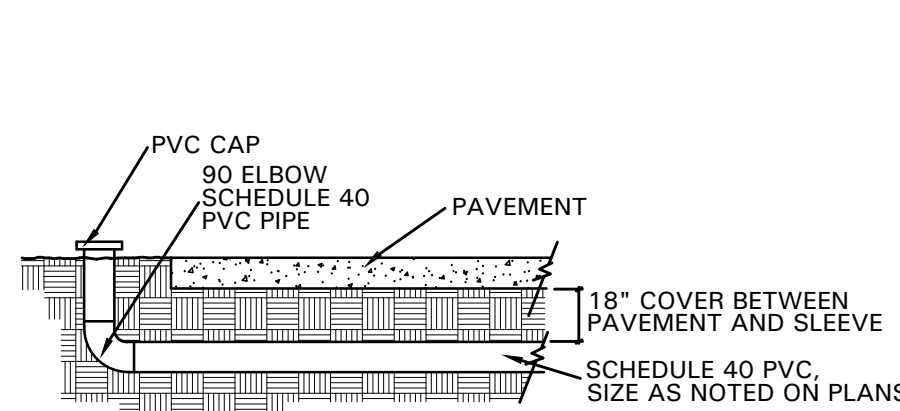
**3.10 FINAL ADJUSTMENT**

- A. After installation has been completed, make final adjustment of sprinkler system in preparation for Owner Authorized Representative's final inspection.
- B. Completely flush system to remove debris from lines by removing nozzle from heads on end of lines and turning on system.
- C. Check sprinklers for proper operation and proper alignment for direction of throw.
- D. Check each section of spray heads for operating pressure and balance to other sections by use of flow adjustment on top of each valve.
- E. Check nozzling for proper coverage. Prevailing wind conditions may indicate that arch of angle of spray should be other than shown on drawings. In this case, change nozzles to provide correct coverage and furnish data to Owner Authorized Representative with each change.

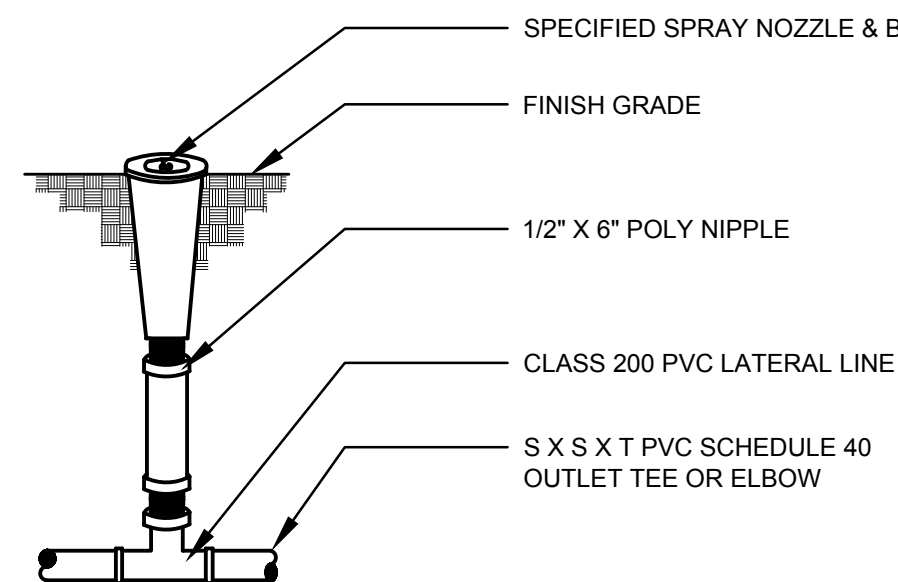
**3.11 SYSTEM DEMONSTRATION**

- A. Instruct Owner's personnel in operation and maintenance of system including adjusting of sprinkler heads. Use operation and maintenance manual for basis of demonstration.

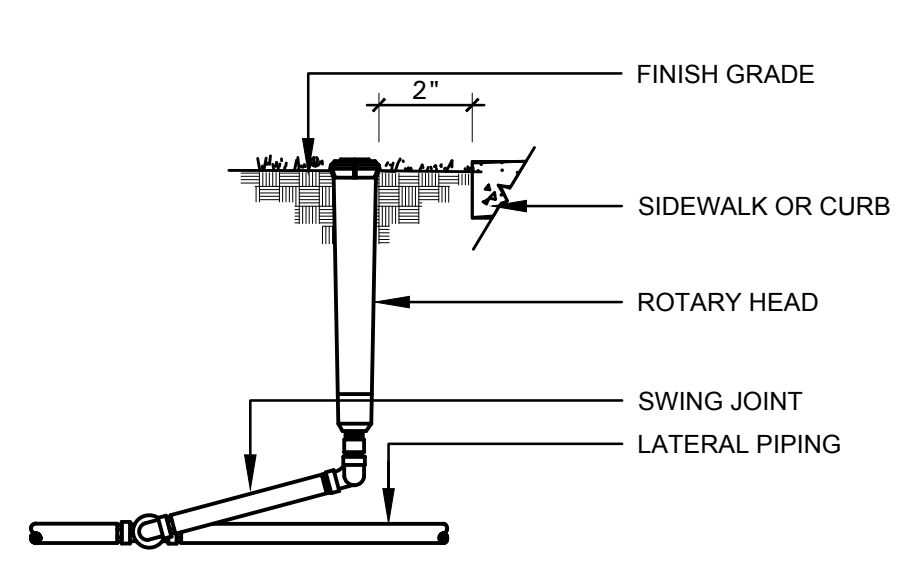
**END OF SECTION**



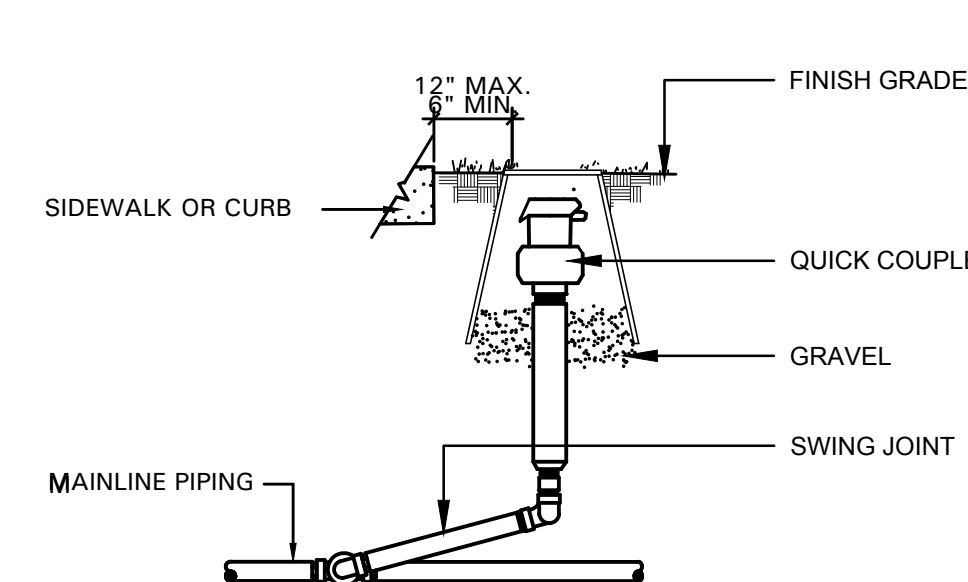
**01 SLEEVE DETAIL**  
NOT TO SCALE



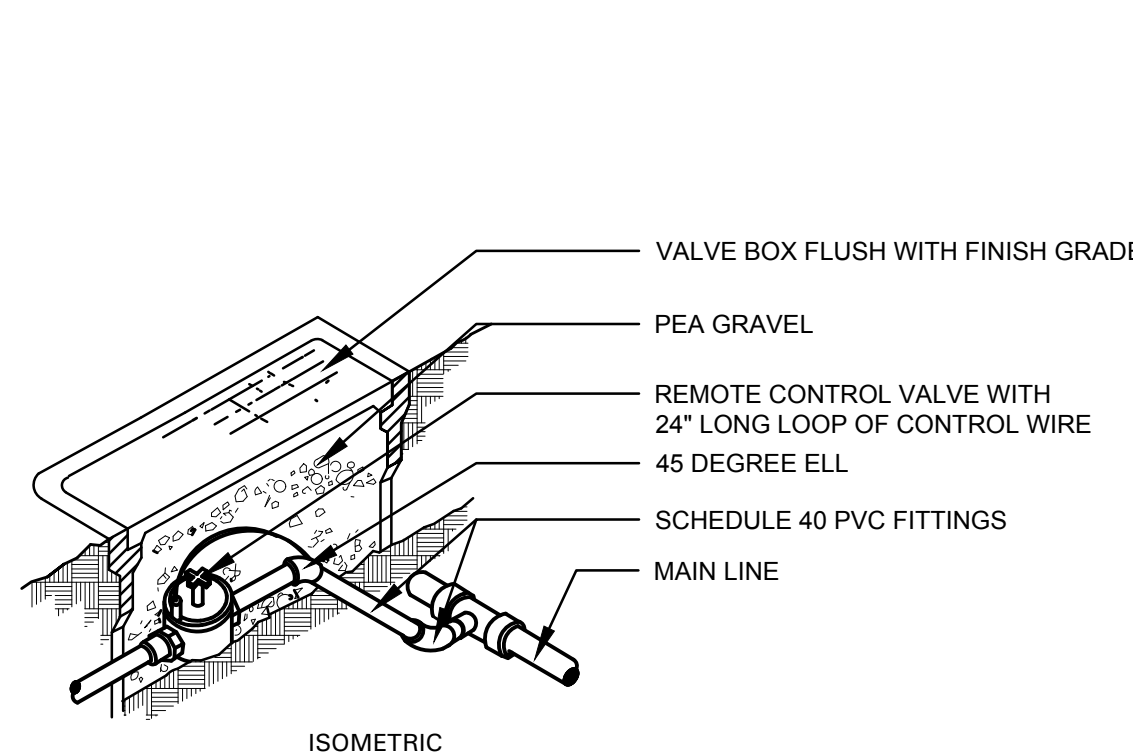
**02 POP-UP LAWN SPRAY ASSEMBLY**  
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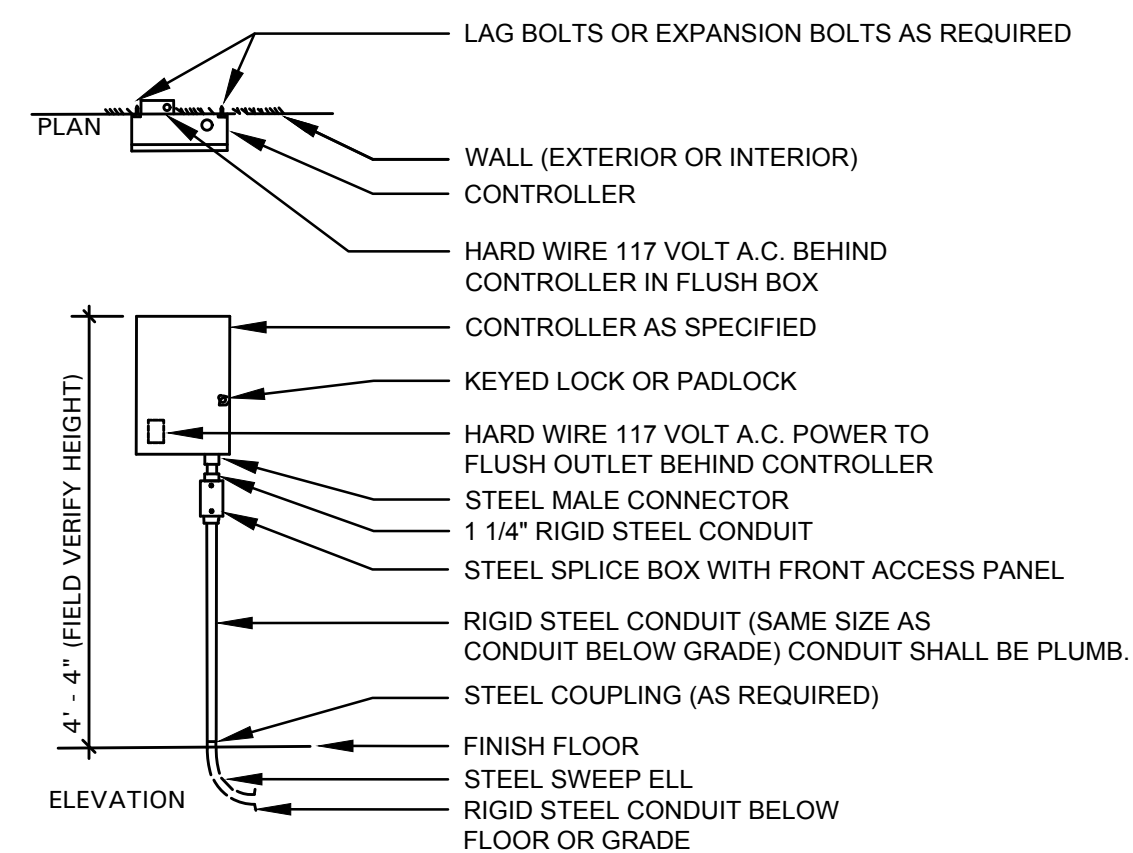
**03 ROTARY HEAD**  
NOT TO SCALE



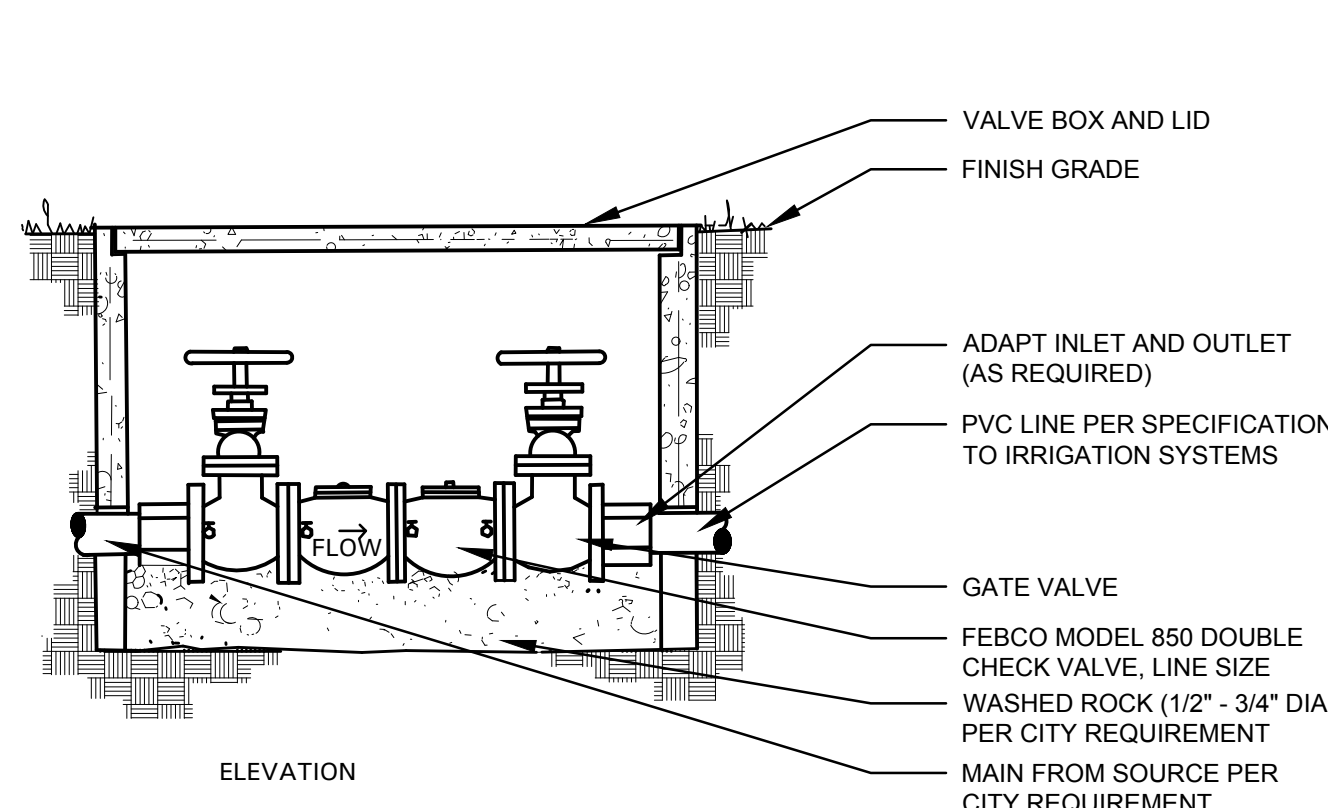
**04 QUICK COUPLER**  
NOT TO SCALE



**05 REMOTE CONTROL VALVE**  
NOT TO SCALE



**06 WALL MOUNTED CONTROLLER**  
NOT TO SCALE



**07 BACKFLOW PREVENTER**  
NOT TO SCALE

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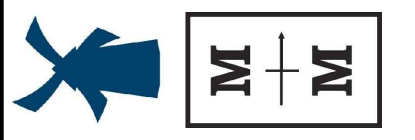
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Project/Client: #22122  
Date: 10/12/22  
11/16/22

Submittal Record: SUBMITTAL REVIEW  
10/12/22 SITE PLAN REVIEW  
11/16/22 SITE PLAN REVIEW

Sheet Title: IRRIGATION SPECIFICATIONS AND DETAILS

Sheet: 4245 North Central Expy Suite 501 Dallas, Texas 75205 214.865.7192 office

**L2.02**





General Electrical Requirements

PART 1 - GENERAL

1.01 DESCRIPTION

This Section summarizes the general requirements for electrical work, and forms a part of all other Sections of these specifications unless otherwise specified. The electrical work consists of furnishing all labor, materials, equipment and performing all operations required for complete and operable electrical systems as indicated on the drawings and/or as specified herein. Miscellaneous appurtenances are not necessarily specified or shown on the plans.

1.02 QUALITY ASSURANCE

- A. Furnish manufacturer's electrical equipment of the types and sizes specified.
- B. Codes and Standards. Provide electrical equipment and materials, including installation, conforming to the following codes and standards, as applicable and as adopted by the authority having jurisdiction. The equipment and materials shall bear labels to indicate manufacturing conformance to the specified standards or equal. Where two codes or standards are at variance the authority having jurisdiction shall apply:
  1. 2017 National Electric Code
  2. National Electrical Safety Code
  3. Local County and City Electrical Codes
  4. Owner's Electrical Standards
  5. American National Standards Institute Standards
  6. American Society for Testing Materials Standard Tests
  7. Certified Ballast Manufacturers Standards
  8. Illuminating Engineering Society Handbook Standards
  9. Insulated Power Cable Engineers Association Standards
  10. National Electrical Manufacturers Association Standards
  11. National Fire Protection Association Standards
  12. Occupational Safety and Health Act
  13. Underwriters' Laboratories, Inc. Standards

1.03 UTILITY COMPANY REQUIREMENTS

All utility installations shall comply with current Public Utilities Commission regulations and requirements. All installations shall comply with current local electric utility service provider standards, procedures and regulations.

1. 2017 National Electric Code
2. National Electrical Safety Code
3. County and City Electrical Codes
4. Owner's Electrical Standards
5. American National Standards Institute Standards
6. American Society for Testing Materials Standard Tests
7. Certified Ballast Manufacturers Standards
8. Illuminating Engineering Society Handbook Standards
9. Insulated Power Cable Engineers Association Standards
10. National Electrical Manufacturers Association Standards
11. National Fire Protection Association Standards
12. Occupational Safety and Health Act
13. Underwriters' Laboratories, Inc. Standards

1.04 SUBMITTALS

All drawings shall be prepared and kept up to date throughout all construction phases. As built drawings may, at any time, be reviewed by the architect, general contractor and/or owner's representative. This section includes responsibility for inspection, acceptance and documentation of all pre-existing installations. Accurate, complete and legible final As Built Drawings shall be submitted within two weeks of finalization of all installations covered under this section or within two weeks of request by owner's representative.

- A. Materials List. Submit complete list of materials to be installed to architect and/or owner as required.
- B. Technical Data. Submit descriptive and instruction manuals to the extent required under this Section and other Sections of Division 16, and the General Conditions.

1.05 PRODUCT DELIVERY, STORAGE, AND HANDLING

- A. Delivery. Deliver electrical materials and equipment in manufacturer's original cartons or containers with seals intact, as applicable. Unless otherwise specified, deliver conductors in sealed cartons or on sealed reels, ends of reeled conductors factory sealed. Deliver large multi-component assemblies in sections that facilitate field handling and installation.
- B. Storage. Unless designed for outdoor exposure, store electrical materials off the ground and under cover to prevent corrosion, contamination, or deterioration.
- C. Handling. Handle materials and equipment in accordance with manufacturers recommendations. Lift large or heavy items only at the points designated by the manufacturer. Use padded slings and hooks for lifting as necessary to prevent damage.

1.06 JOB CONDITIONS

Electrical Drawings are diagrammatic and indicate the general layout of the complete work. Locations of equipment, inserts, anchors, motors, panels, pull boxes, conduits, stub-ups, fitting, lighting fixtures, convenience outlets, exterior lighting units, and ground wells are approximate. Conform to Drawings as closely as possible. Exercise care to secure approved headroom and clearances, and to overcome structural interference. Verify scaled dimensions, field dimensions, and conditions at the place of work.

Underground electric lines shown on the plans are, to a degree, symbolic. Refer to the existing as built, Electrical, Mechanical and all other drawings available for locations of possible interference. Hand dig or otherwise cautiously dig the trenches for the underground lines in areas where interferences are possible or where electric lines must pass or cross below or above existing.

- A. Changes. Submit written details and reasons for proposed deviations from Drawings and Specifications, and do not deviate therefrom unless authorized by Field Order or Change Order. If approved changes requested by general contractor and/or owner require alteration of structures or related work, make the alterations in full compliance with all applicable codes and ordinances.
- B. Protection. Protect electrical materials and equipment until final acceptance. Protect factory painted surfaces from impact, abrasion, discoloration, and other damage. Keep electrical equipment, materials, and insulation dry at all times. If partial dismantling of equipment is required for installation, box or wrap the removed parts until reinstalled. Repair or replace damaged work as directed, at no additional cost to the owner.
- C. Coordinate. Coordinate electrical work with all trades, code authorities and public utilities. Where two or more trades interface in an area, verify that no electrical work is omitted.
- D. Safety. Maintain and operate all equipment and fixtures in a safe and responsible manner. Conduct all construction operations in a safe manner for all employees as well as any other persons within the workspace. Hold all others harmless of negligent safety practices which could cause injury to others on or near the jobsite.

1.07 RELATED ELECTRICAL WORK

Review entire Contract Documents and provide all electrical work required for the entire project, even if it is specified in Divisions other than Division 16, unless specifically excluded in advance.

1.08 POWER SUPPLY

The power supply shall be alternating current, 60 hertz and at the voltage indicated on the drawings.

1.09 PERMITS

Procurement of permits is not included in this section. Obtain and pay for permits, licenses and/or inspections required for electrical construction work if specifically required in writing by owner, architect and/or general contractor prior to award of contract.

1.10 OUTAGES

Keep power shutdown periods to the minimum time feasible, and only for such times and durations as may be approved. Submit written request for outage approval at least 2 working days in advance of need, stating date, time, and probable duration.

1.11 AREA CLASSIFICATIONS

Installation areas for electrical equipment, materials, and wiring are classified as "Non-Hazardous" unless otherwise indicated or specified.

1.12 GUARANTEE AND WARRANTY

Guarantee all work of Division 16 in accordance with the General Conditions. With respect to equipment, condition guarantee to cover (1) faulty or inadequate design; (2) improper assembly or erection; (3) defective workmanship or materials; and (4) incorrect or inadequate operation, or other failure. For equipment bearing a manufacturer's warranty in excess of one (1) year, furnish a copy of the warranty to the architect for submittal to owner who shall be named as beneficiary.

PART 2 - PRODUCTS

2.01 MATERIALS AND EQUIPMENT

Provide new materials and equipment as required to complete all indicated and specified electrical work, including incidental items inferable from the Contract Documents that are necessary to complete the work. Provide materials and equipment of latest design, standard products of established manufacturers. For uniformity, only one manufacturer is acceptable for each type of product. Manufacture individual parts to standard sizes and gages so repair parts can be installed in the field. Make like parts of duplicate units interchangeable. Do not place equipment in service at any time prior to delivery except as required for factory or shop tests or as requested by owner, architect and/or general contractor.

- A. Prohibited Materials. Aluminum conductors are not acceptable unless approved for each use and location.
- B. Damaged Products. Notify the general contractor in writing if any equipment or material is damaged. Do not repair damaged products without prior written approval.
- C. Outdoor Equipment. Outdoor electrical equipment shall be weatherproof, NEMA 3R (enclosure detailed on drawings) unless shown otherwise on the construction drawings.
- D. Factory Finishes. Unless otherwise specified in other Division 16 sections or in the Special Conditions, the sheet metal surfaces of equipment enclosures shall be phosphatized and coated with a rust resisting primer. Over the primer, apply a corrosion resistant baked enamel finish on the interior and exterior metal surfaces. The exterior color shall be ASA No. 49 medium light gray. The interior color shall be white. Hardware shall have a corrosion resistant finish. Sheet metal enclosures and lighting fixtures, in corrosive areas, shall have an outer coating of corrosion resistant epoxy.

PART 3 - EXECUTION

3.01 GENERAL

Install electrical work in accordance with all applicable codes and standards except where more stringent requirements are indicated or specified. Verify that materials and equipment properly fit the installation space with clearances conforming to all applicable codes and standards except where greater clearance is indicated. Perform work as required to correct improper installations, at no additional cost to the owner.

3.02 ELECTRICAL SUPERVISION

In addition to supervision required under the General Conditions, assign a competent representative to supervise the electrical construction work from beginning to completion and final acceptance.

3.03 INSPECTION

Inspect each item of material and equipment for damage, defects, completeness, and correct operation prior to installation. Inspect previously installed related work and verify that it is ready for installation of electrical work.

3.04 PREPARATION

Prior to installing electrical work, ensure that installation areas are clean. Maintain the areas in a broom-clean condition during installation operations. Clean, condition, and service equipment in accordance with the manufacturer's instructions, approved submittals, and other requirements indicated or specified.

3.05 WORKMANSHIP

Employ skilled craftsmen experienced in installation of the types of electrical materials and equipment specified. Use specialized installation tools and equipment as applicable. Produce acceptable installations free of defects.

3.06 PROTECTIVE DEVICE ADJUSTMENTS

Adjust all protective devices as required. Adjustments shall conform to the serving utilities requirements & ANSI/IEEE Standard 242. No equipment shall be operated prior to said adjustments being properly completed and verified /tested.

3.07 FIELD QUALITY CONTROL

- A. Manufacturers' Supervision and Field Installation Check. Where specified, electrical equipment and/or fixture manufacturer shall furnish the services of an authorized representative specially trained and experienced in the installation of his equipment and/or fixture to (1) supervise the equipment and/or fixture installation in accordance with the approved submittals and manufacturer's instructions, (2) be present when the equipment and/or fixture is first put into operation, (3) inspect, check, adjust as necessary, and approve the installation, (4) repeat the inspection, checking, and adjusting until all trouble or defects are corrected and the equipment and/or fixture installation and operation are acceptable, and (5) prepare and submit the specified Manufacturer's Certified Report.
- B. Operational Demonstration. Demonstrate that performance of installed electrical materials and equipment complies with requirements specified in Division 16. Operate equipment through entire no-load to full-load range for not less than 24 hours unless a longer period is specified elsewhere. Immediately correct defects and malfunctions with approved methods and materials in each case, and repeat the demonstration. Conform to the approved demonstration plan.
- C. Final Operation Tests. Test all electrical systems for not less than 24 hours, with no interruptions except for normal maintenance or corrective work. Conform to the approved test plan. Coordinate with final operation tests required under other Divisions.

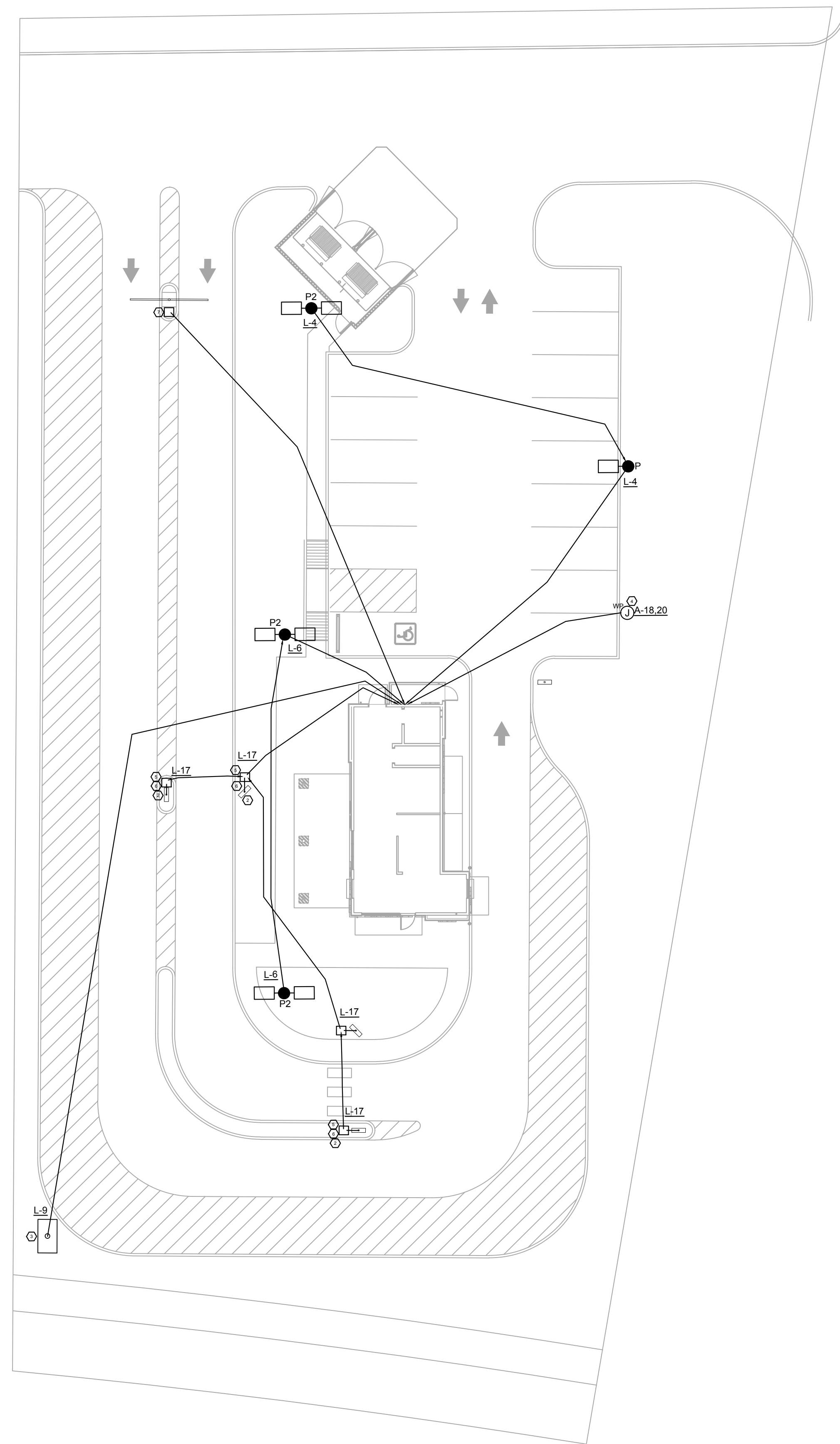
1. Testing Materials. Furnish labor, instruments, recorders, gages, materials, and power for tests as required.
2. Testing Methods. Operate systems continuously 24 hours a day under constant inspection of trained operators. Cause variable range equipment to cycle through the applicable range at a steady rate of change. Induce simulated alarm and distressed operating conditions, and test controls and protective devices for correct operation in adjusting system functions or causing system shutdown.
3. Defects. Immediately correct all defects and malfunctions disclosed by tests. Use new parts and materials as required and approved. Add the interruption time for corrective work to the specified total test period.

**SHEET LEGEND**

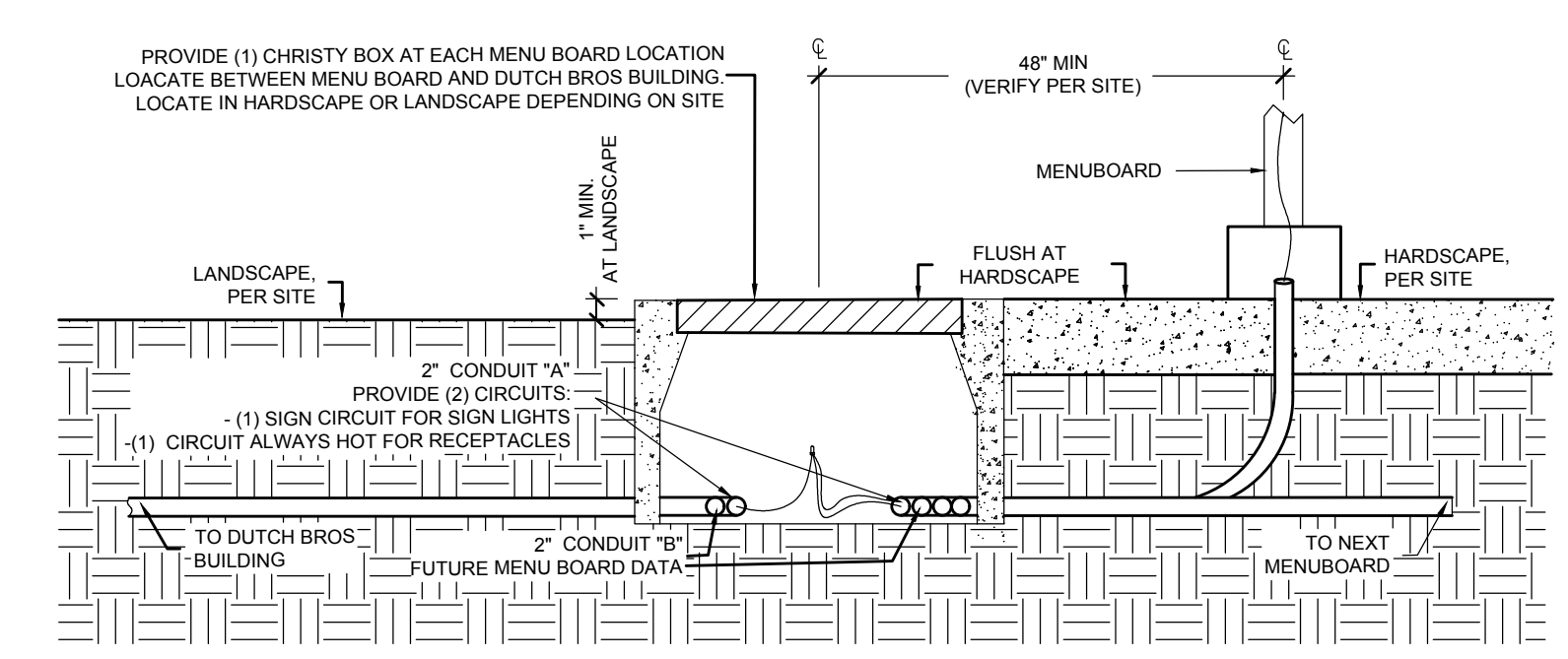
- SHEET ES-0.1 - SPECIFICATIONS
- SHEET ES-1.0 - ELECTRICAL SITE PLAN
- SHEET ES-1.1 - CANOPY LIGHTING DETAIL
- SHEET ES-2.0 - PHOTOMETRIC SITE PLAN

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DESIGNED:	S. B.G.																							
CHECKED/STAMPED:	SCOTT B. GARRISON, P.E.																							
STAMP:	<p style="margin: 0;"><b>SITE PLAN REVIEW</b></p> <p style="margin: 0; font-size: 8px;">10/12/22</p>																							
DESIGNER:	<p style="margin: 0; font-size: 8px;">730 Sandhill Rd., #250, Reno, Nevada 89521 tel 775-824-9988 www.tectonicsdesigngroup.com fax 775-824-9986</p>																							
PROJECT/CLIENT:	<p style="margin: 0;"><b>Dutch Bros No.: TX0306</b></p> <p style="margin: 0; font-size: 8px;">West Villa Maria Road, Bryan, TX 77807</p> <hr style="width: 100%;"/> <p style="margin: 0; font-size: 8px;"><b>MAIN &amp; MAIN</b> CAPITAL GROUP, LLC 5750 Genesis Ct, Suite 103, Frisco, Texas 75034 tel 214-308-0008</p>																							
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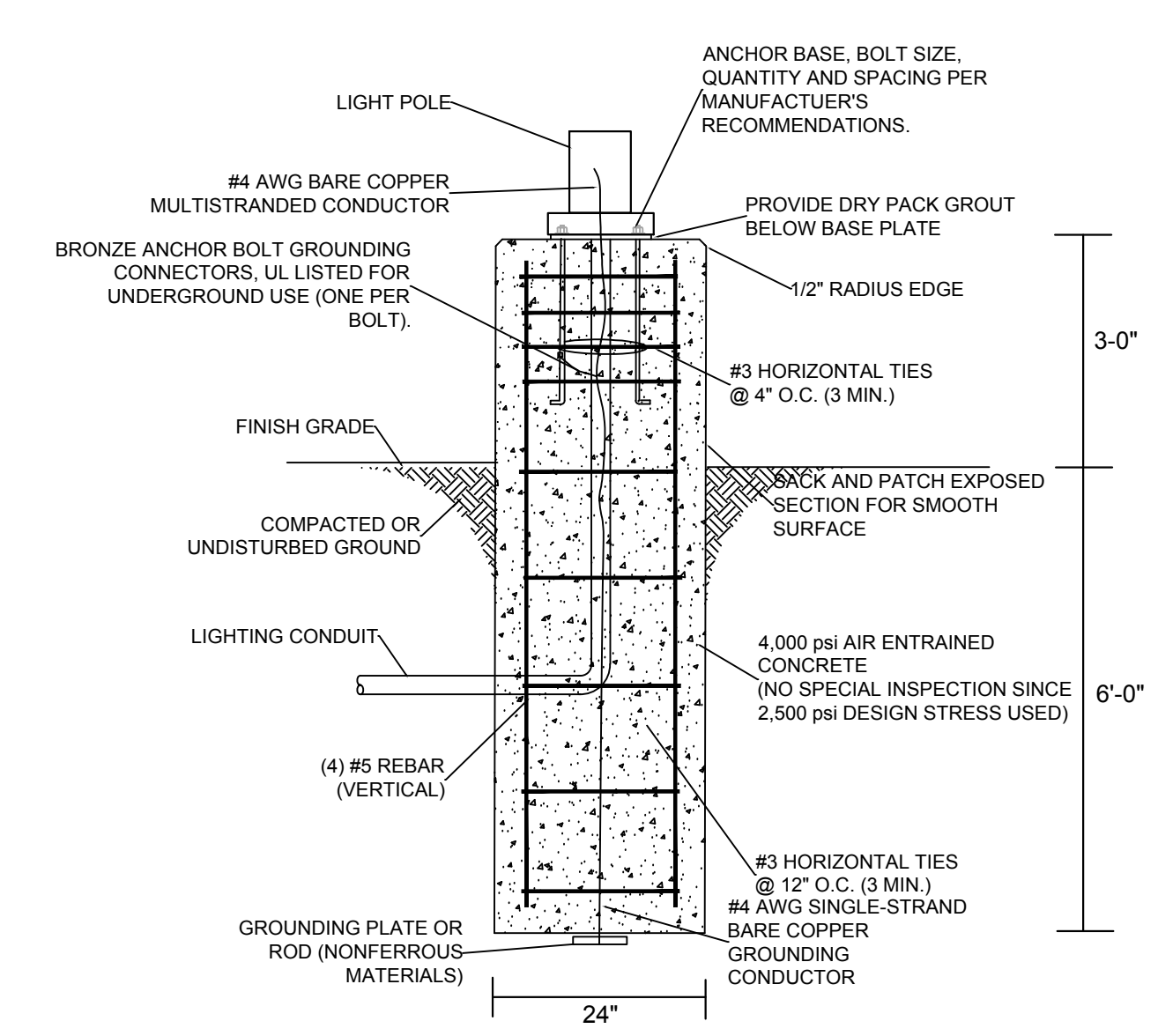




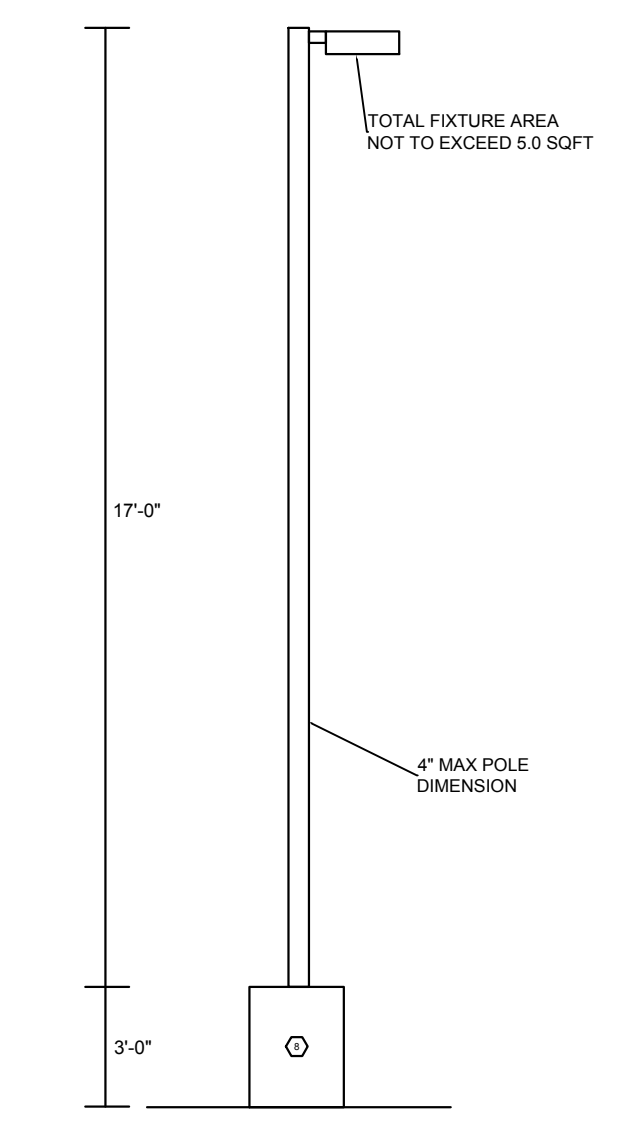
**1 ELECTRICAL SITE PLAN**  
 Scale: 0 30' 60'



**2 MENU BOARD & CHRISTY BOX DETAIL**  
 Scale: NOT TO SCALE



**3 PARKING LOT LIGHT POLE BASE**  
 Scale: N/A



**4 PARKING LOT LIGHT ELEVATION**  
 Scale: N/A

**GENERAL NOTES**

- FOR UTILITY TRANSFORMER, TELEPHONE SERVICE, GAS, WATER AND SANITARY SEWER LOCATIONS; SEE CIVIL SITE PLAN.
- THE ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR COORDINATION AND COMPLIANCE WITH ALL UTILITY COMPANY REQUIREMENTS AND STANDARDS. VERIFY REQUIREMENTS WITH UTILITY PRIOR TO INSTALLATION.

**KEYED NOTES**

- Ⓢ THE LOCATION OF UTILITY METER AND CT CABINET. INSTALLATION PER LOCAL ELECTRIC UTILITY STANDARDS. SEE ELECTRICAL DETAIL 1 (RISER DIAGRAM) ON MODULAR BUILDING ELECTRICAL SHEET E1.0.
- Ⓢ PROVIDE 120V ELECTRICAL CONNECTION WITH (2) #8 & (1) #8 GND IN A 2" PVC CONDUIT ROUTED BELOW GRADE THROUGH CHRISTY BOX FOR DRIVE-THRU BACKLIT MENU BOARD PER MANUFACTURER'S INSTRUCTIONS. CONDUIT SHALL COME UP IN THE CENTER OF POST. SEE DETAIL 2 ON THIS SHEET. SIGN COMPANY REPRESENTATIVE TO GIVE EXACT LOCATIONS AND DIMENSIONS FOR EC TO MATCH. CONTRACTOR SHALL REPAIR ANY EXISTING PARKING SURFACES FROM TRENCHING TO MATCH PREVIOUS CONDITIONS.
- Ⓢ PROVIDE 120V ELECTRICAL CONNECTION WITH (2) #8 & (1) #8 GND IN A 2" PVC CONDUIT ROUTED BELOW GRADE FOR NEW MONUMENT SIGN PER REPRESENTATIVE PRIOR TO ROUGH-IN. COORDINATE LOCATION WITH OWNER/ARCHITECT FOR MONUMENT SIGN REQUIREMENTS. IF ANY, CONTRACTOR SHALL REPAIR ANY EXISTING PARKING SURFACES FROM TRENCHING TO MATCH PREVIOUS CONDITIONS.
- Ⓢ (FUTURE) ELECTRIC VEHICLE CHARGING STATION LOCATION. EC TO PROVIDE A 2" CONDUIT MARKED "EV CAPABLE" FROM PANEL "B" TO THE JUNCTION BOX SHOWN ON PLANS. SEE PANEL SCHEDULE ON MODULAR BUILDING ELECTRICAL SET FOR MORE INFORMATION.
- Ⓢ PROVIDE A 2" PVC CONDUIT WITH PULL STRING ROUTED BELOW GRADE TO CHRISTY BOX FOR FUTURE DIGITAL MENU BOARD UPGRADE. SEE DETAIL 2 ON THIS SHEET. CONTRACTOR SHALL REPAIR ANY EXISTING PARKING SURFACES FROM TRENCHING TO MATCH PREVIOUS CONDITIONS.
- Ⓢ PROVIDE 2" CONDUIT WITH PULL STRING 24" BEHIND MENU BOARD TO CHRISTY BOX FOR FUTURE DIGITAL MENU BOARD UPGRADE. COORDINATE WITH SIGN MANUFACTURER.
- Ⓢ PROVIDE 2" CONDUIT WITH PULL STRING TO CHRISTY BOX BETWEEN "CHOOSE LANE" DIRECTIONAL SIGN AND CLEARANCE BAR FOR FUTURE DRIVE THRU SENSORS.
- Ⓢ LIGHT POLE BASE IS TO BE LEFT WITH THE SACK FINISH. DO NOT PAINT.
- Ⓢ LOCATION OF CABLE INTERNET DEMARC.
- Ⓢ LOCATION OF UTILITY TRANSFORMER. EC IS RESPONSIBLE TO ROUTE CONDUITS AND SECONDARY WIRING PER THE MODULAR BUILDING SINGLE LINE DIAGRAM TO THE CT/METER PANEL PER LOCAL UTILITY STANDARDS.

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 DESIGNED: S.B.G.  
 CHECKED/STAMPED: SCOTT B. GARRISON, P.E.

SITE PLAN REVIEW

10/12/22

DESIGNER: FRM #22395

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PROJECT/CLIENT: #22122

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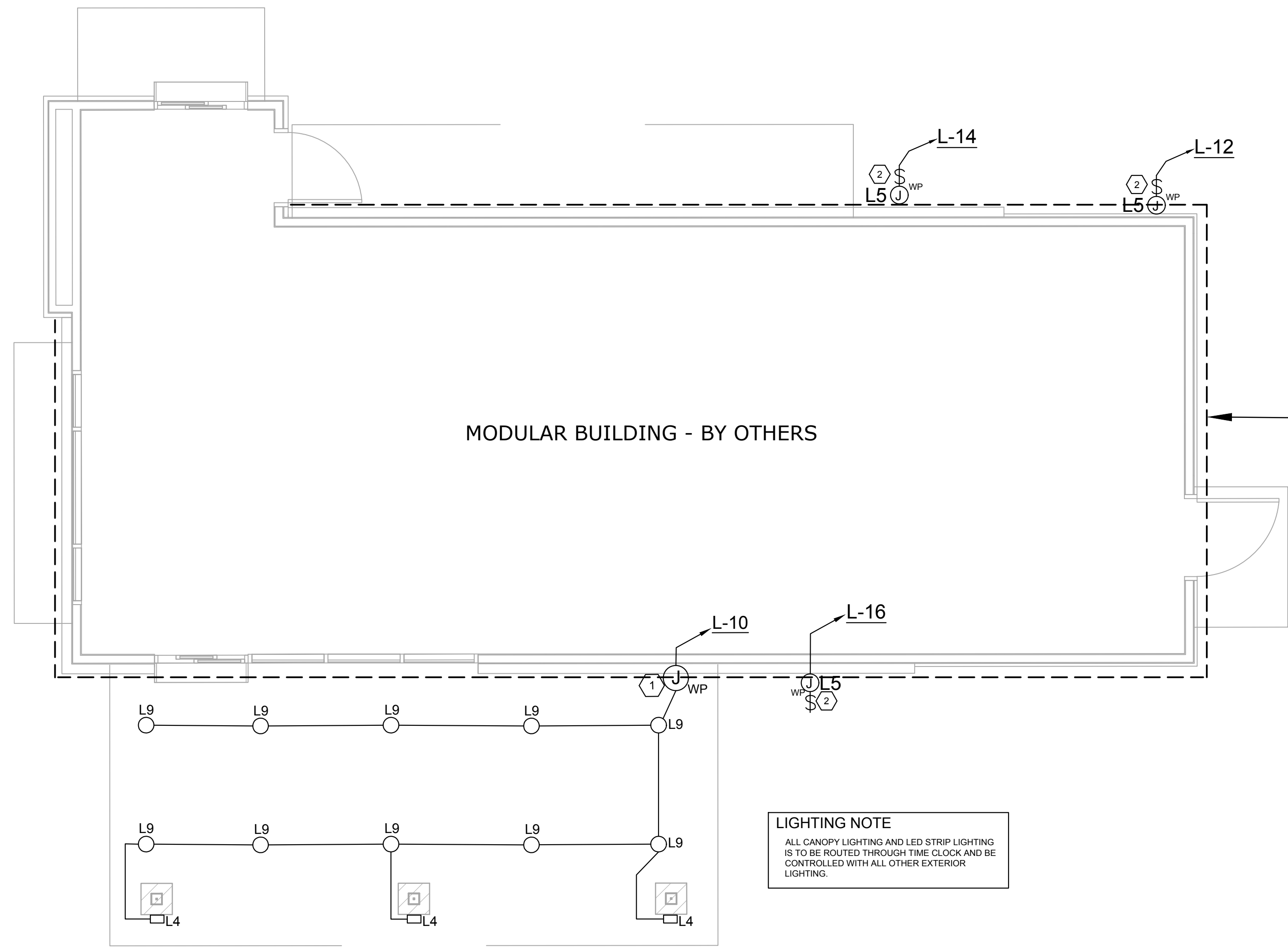
**MAIN & MAIN CAPITAL GROUP, LLC**  
 5750 Genesis Ct, Suite 103, Frisco, Texas 75034  
 tel 214-308-0008

DATE: 10/12/22  
 SUBMITTAL: SITE PLAN REVIEW

SHEET TITLE: ELECTRICAL SITE PLAN

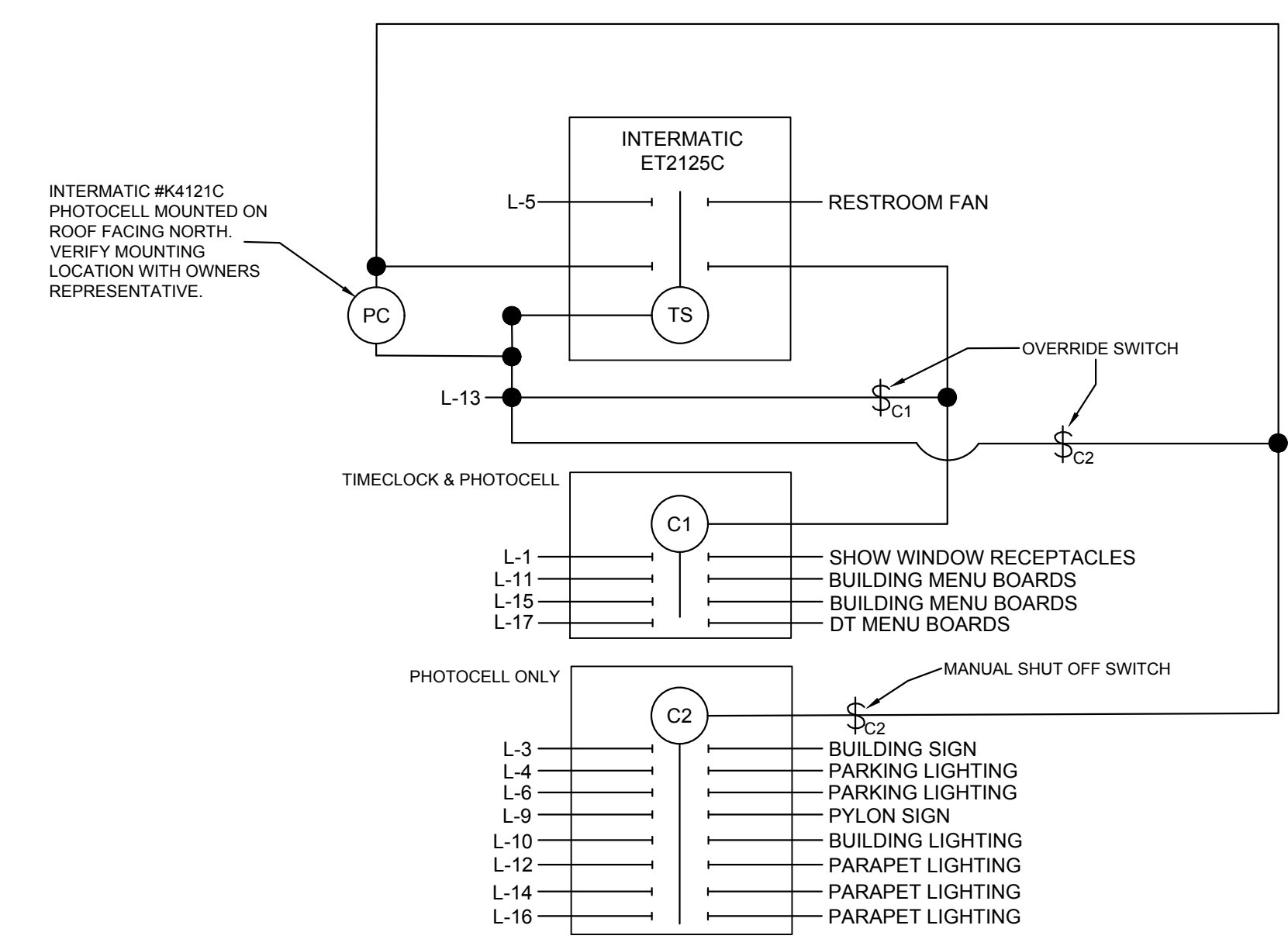
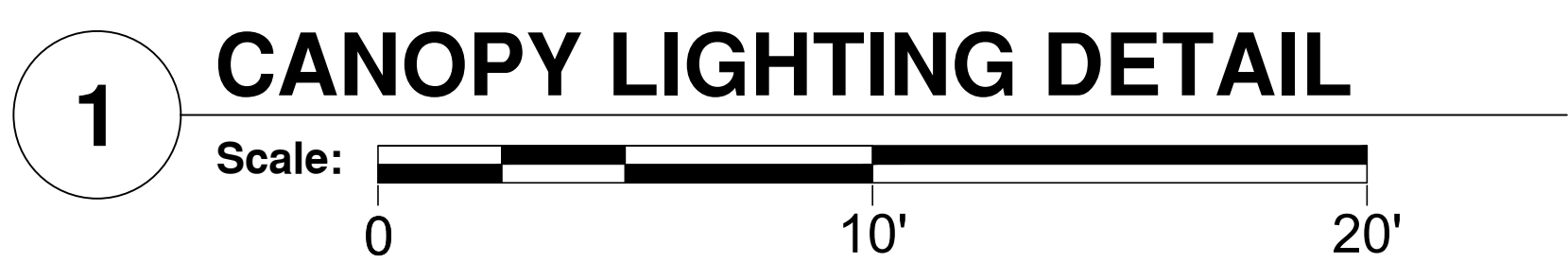
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**L5 PERIMETER LIGHTING NOTE**  
 L5 LED STRIP LIGHTING IS TO BE INSTALLED ALONG PERIMETER OF PARAPET #2 ELEVATION INSIDE COVE AT APPROX 20'-10". L5 LIGHTING IS SHOWN WITH A DASHED LINE ON DETAIL 1.

**LIGHTING NOTE**  
 ALL CANOPY LIGHTING AND LED STRIP LIGHTING IS TO BE ROUTED THROUGH TIME CLOCK AND BE CONTROLLED WITH ALL OTHER EXTERIOR LIGHTING.



LIGHTING SCHEDULE							
ID	MANUFACTURER	MODEL #	QTY	LAMP TYPE	VOLTAGE	WATTAGE	DESCRIPTION
L4	LIGMAN	UMT-31416-DBNA / 14/14W-N-W40-02-120/27V	3	LED	120/277	14W	14/14W; NARROW BEAM, 40W, 4000K, DARK GRAY, 120/277V; TO BE USED AT CANOPY COLUMNS ONLY W/BLUE FILTER. VERIFY BEAM DIRECTIONS WITH OWNER. BOTTOM OF FIXTURE AT 8'-0" A.F.F.
L5	LEKTRON	LASER, 120-277VAC, 24VDC (PHILLIPS ADVANCE), 1.5 W / FT., DIMMABLE	115FT	LED	24	1.5W / FT	BLUE LED STRIP LIGHTING AT PERIMETER OF PARAPET 2, REMOTE DRIVER INDOOR / OUTDOOR RATED; LOCATE INSIDE OF BUILDING IN ACCESSIBLE LOCATION. USE TRANSFORMER SIZES PER RUNS/ WIRING GROUPS. MAX RUN LENGTH IS 48'-0". NOTE: GC IS RESPONSIBLE TO PROCURE AND INSTALL THE LED STRIP LIGHTING. MODULAR BUILDING WILL COME PRE-WIRED TO JUNCTION BOXES TO SUPPORT INSTALLATION.
L9	DMF	DRD5S-4-R-07-9-30 / DRDH-N-JO-KH MV, 120V, NON-DIM	10	LED	120/277	12W	USED ONLY FOR APPLICATIONS REQUIRING SURFACE CEILING MOUNTED LIGHTS. RECESSED OCTAGONAL 2" HT. J-BOX HOUSING W/ SURFACE DOWNLIGHT, 4.75" DIAMETER, 3/8" DEEP, WHITE, LED, 750LM, 3000K, WET LISTED
P1	NLS	NV-1-T4-64LSP-1-40K-UNV-ASA-BRZ POLE IS NLS SSP17-4S-11G-98C-SGL-BRZ-34 30-CL	1	LED	120/277	205W	SITE POLE HEAD, LED, 205W, 23000LM, (OR 196W, 19000LM, IF LOWER WATTAGE IS REQUIRED), 4000K, DARK BRONZE, TYPE IV DISTRIBUTION, W/ 17'-4" POLE (VERIFY FOR EACH SITE), 4" SQUARE STRAIGHT 11GA STEEL, INCLUDES ANCHOR BOLTS 12" BOLT CIRCLE 3/4" DIA x 30" LONG. VERIFY PER LOCAL REQUIREMENTS PRIOR TO ORDERING - POLE LENGTH, WATTAGE/LUMENS, KELVIN LIGHT TEMPERATURE, MOUNTING CONFIGURATION - SINGLE/DOUBLE HEAD AND COLOR. HEAD BRACKET HOLES ARE FACTORY PRE-DRILLED GIVEN AVAILABLE LEAD TIME. CUT AND DRILL IN FIELD IF REQUIRED SHORTENED, VERIFY HEIGHT AND COLOR WHEN ORDERING.
P2	NLS	NV-1-T4-64LSP-1-40K-UNV-ASA-BRZ POLE IS NLS SSP17-4S-11G-98C-D-180-BRZ-34 30-CL	3	LED	120/277	205W EACH	(2) SITE POLE HEADS, LED, 205W, 23000LM, (OR 196W, 19000LM, IF LOWER WATTAGE IS REQUIRED), 4000K, DARK BRONZE, TYPE IV DISTRIBUTION, W/ 17'-4" POLE (VERIFY FOR EACH SITE), 4" SQUARE STRAIGHT 11GA STEEL, INCLUDES ANCHOR BOLTS 12" BOLT CIRCLE 3/4" DIA x 30" LONG. VERIFY PER LOCAL REQUIREMENTS PRIOR TO ORDERING - POLE LENGTH, WATTAGE/LUMENS, KELVIN LIGHT TEMPERATURE, MOUNTING CONFIGURATION - SINGLE/DOUBLE HEAD AND COLOR. HEAD BRACKET HOLES ARE FACTORY PRE-DRILLED GIVEN AVAILABLE LEAD TIME. CUT AND DRILL IN FIELD IF REQUIRED SHORTENED, VERIFY HEIGHT AND COLOR WHEN ORDERING.

**PURCHASING:** THE ABOVE LIGHTING MATERIAL IS TO BE PURCHASED AS A "LIGHTING PACKAGE" FROM DUTCH BROTHERS COFFEE'S NATIONAL ACCOUNTS FROM THE REQUIRED LIGHTING VENDORS LISTED BELOW. MADE AVAILABLE TO FRANCHISEES AND THEIR CONTRACTORS AT ESTABLISHED DISCOUNT PRICING, USED FROM NEGOTIATED STOCK INVENTORIED PRODUCT COMMITTED TO, AND OBLIGATED FOR USE BY DUTCH BROS COFFEE. FOR QUOTATION, ORDER PLACEMENT AND DELIVERY. IF ANYTHING OTHER THAT ABOVE IS INSTALLED WITHOUT EXPRESSED WRITTEN CONSENT BY DUTCH BROS COFFEE CORPORATE OFFICE AND THE FRANCHISEE, CONTRACTOR WILL BE REQUIRED TO REMOVE IT AND REPLACE IT WITH THE ABOVE.

**REQUIRED LIGHTING VENDORS:**

- IMPERIAL LIGHTING - KURT TOMASOVICH - 760-636-0762 - KURT@IMPERIAL-LIGHTING.COM
- GRAYBAR - DAVID (DAVE) ARRINGTON - 817-213-0850 - DAVE.ARRINGTON@GRAYBAR.COM
- VILLA LIGHTING SUPPLY - NICK BECKER - 314-478-3141 - NICK.BECKER@VILLALIGHTING.COM

**GENERAL NOTES**

- ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR ORDERING AND INSTALLING LIGHTING IN THE DUTCH BROTHERS OUTDOOR CANOPY. COORDINATE INSTALLATION WITH THE MODULAR BUILDING AFTER DELIVERY.

**KEYED NOTES**

- TIE LIGHTING CIRCUIT INTO JUNCTION BOX LOCATED IN THE CANOPY SOFFIT (PROVIDED BY MODULAR BUILDING MANUFACTURER). JUNCTION BOX WILL HAVE CONDUIT RUNNING TO PANEL 'A' ON THE INTERIOR OF THE MODULAR BUILDING. ENSURE THE LIGHTING CIRCUIT IS TIED INTO THE TIME CLOCK.
- POWER FOR PARAPET LIGHTING DRIVER. EC TO COORDINATE WITH LEKTRON AND/OR MODULAR BUILDING MANUFACTURER FOR TRANSFORMER LOCATIONS.

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**DRAWN:** S.B.G.  
**DESIGNED:** S.B.G.  
**CHECKED/STAMPED:** SCOTT B. GARRISON, P.E.

**SITE PLAN REVIEW**

**STAMP:** 10/12/22

**TECTONICS DESIGN GROUP**  
 730 Sandhill Rd., #250, Reno, Nevada 89521  
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**DESIGNER:** FRM #22395

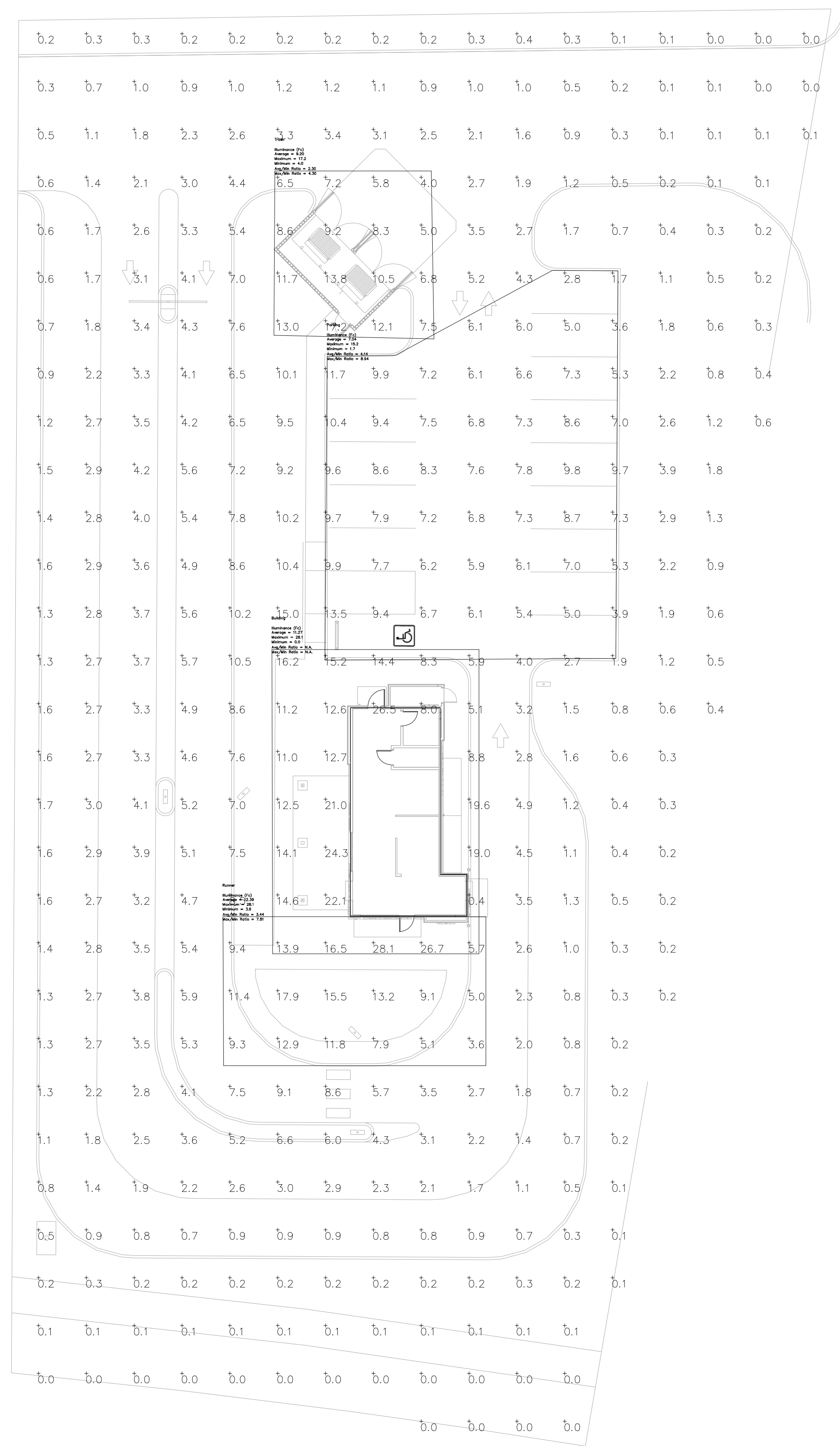
**Dutch Bros No.: TX0306**  
 West Villa Maria Road, Bryan, TX 77807  
**MAIN & MAIN CAPITAL GROUP, LLC**  
 5750 Genesis Ct, Suite 103, Frisco, Texas 75034  
 tel 214-308-0008

**PROJECT/CLIENT:** #22122

**DATE:** 10/12/22  
**SUBMITTAL RECORD:** SUBMITTAL SITE PLAN REVIEW

**SHEET TITLE:** CANOPY LIGHTING DETAIL  
**SHEET:** ES-1.1





**1 PHOTOMETRIC CALCULATIONS**  
 Scale: 0 30' 60'

**Photometric Statistics**

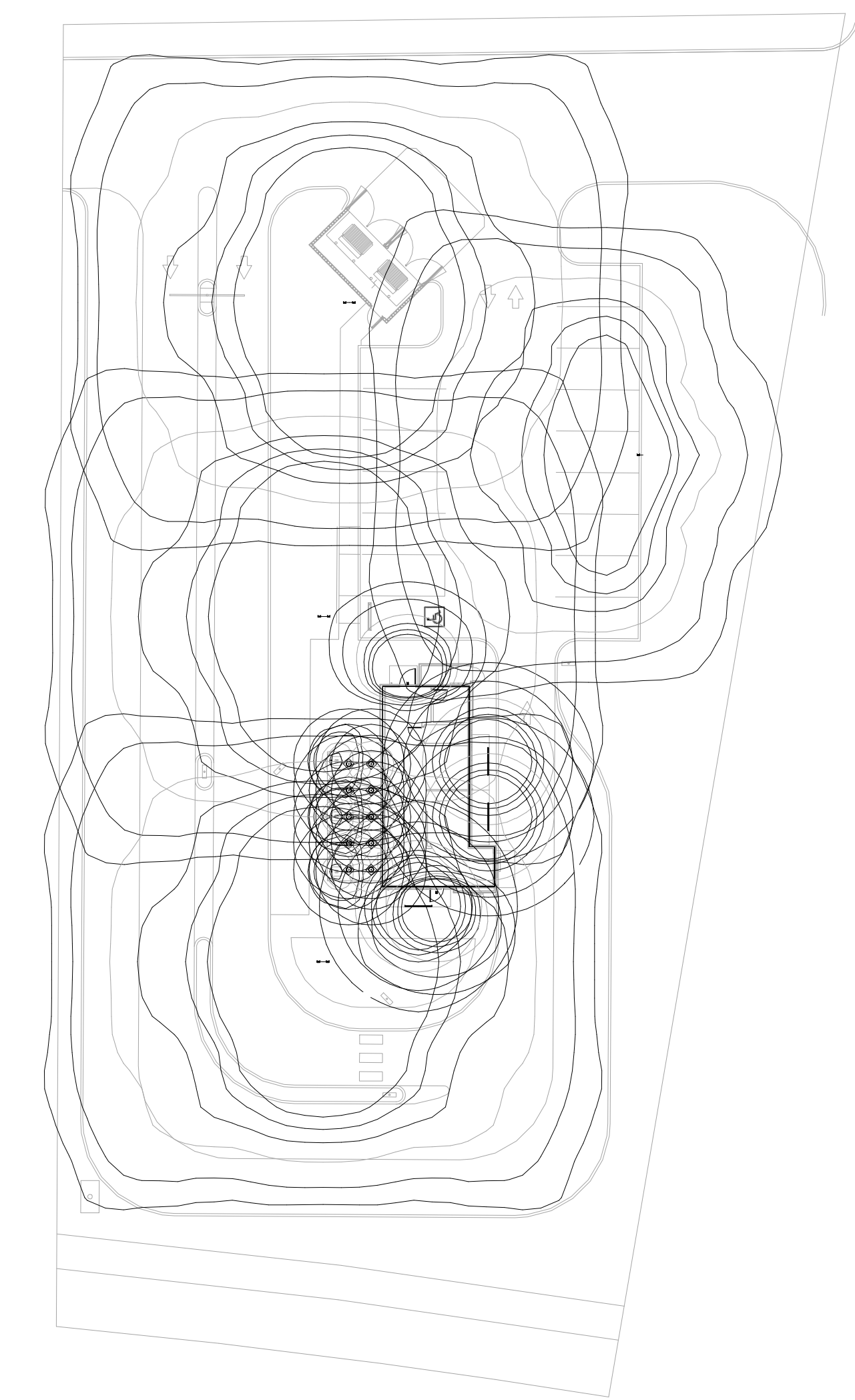
**SITE**  
 ILLUMINANCE (FC)  
 AVERAGE=4.08 MAXIMUM=28.1 MINIMUM=0.0 AVG/MIN=N.A. MAX/MIN=N.A.

**BUILDING**  
 ILLUMINANCE (FC)  
 AVERAGE=14.61 MAXIMUM=28.1 MINIMUM=0.4 AVG/MIN=36.53 MAX/MIN=70.25

**PARKING**  
 ILLUMINANCE (FC)  
 AVERAGE=7.04 MAXIMUM=15.2 MINIMUM=1.7 AVG/MIN=4.14 MAX/MIN=8.94

**RUNNER**  
 ILLUMINANCE (FC)  
 AVERAGE=12.39 MAXIMUM=28.1 MINIMUM=3.6 AVG/MIN=3.44 MAX/MIN=7.81

**TRASH**  
 ILLUMINANCE (FC)  
 AVERAGE=9.20 MAXIMUM=17.2 MINIMUM=4.0 AVG/MIN=2.30 MAX/MIN=4.30



**2 LIGHTING DISTRIBUTION AREAS**  
 Scale: 0 40' 80'

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PROJECT/CLIENT:  
 #22122

DATE: 10/12/22  
 SUBMITTAL: SITE PLAN REVIEW

SUBMITTAL RECORD:


SHEET TITLE: **PHOTOMETRIC SITE PLAN**

SHEET: **ES-2.0**