

Exhibit A.1 - Adjacent Ways



Tempe Unified School District

Frank Elementary School

June 14, 2018

DIV	DESCRIPTION	ADJWAYS ON-SITE	ADJWAYS OFF-SITE	TOTAL
1A	Survey & Layout	1,910	4,310	6,220
1B	Materials Testing and Special Inspections	1,000	500	1,500
2A	Demolition	80,862	6,430	87,292
3A	Concrete	45,289	70,240	115,529
26A	Electrical Dry Utilities	38,500		38,500
31A	Earthwork	111,631	89,123	200,753
33A	Site Utilities		127,571	127,571
	Project Requirements	3,290	2,193	5,483
	General Conditions	16,605	11,070	27,675
	Materials Escalation Contingency	1,638	1,706	3,344
	City Review Contingency	2,694	2,805	5,499
	Contractor Contingency	9,100	9,476	18,576
	Insurance, Bldr Risk, Bonds	8,918	9,286	18,205
	Gross Receipts Tax	24,370	25,377	49,747
	Contractor Fee	18,200	18,952	37,152
	TOTAL CONSTRUCTION COSTS:	364,007	379,039	743,045



DIV	DESCRIPTION	ADJWAYS OFF-SITE QUANTITY	ADJWAYS ON-SITE QUANTITY	UNIT	TOTAL COST	DIVISION SUM
1B	Survey & Layout					
	<u>Site Survey</u>					
	Offsite Survey	1	1	LS	3,820	
	<u>Misc. Survey</u>					
	Locating Services	1		LS	2,400	
	Total Survey & Layout					6,220
1B	Materials Testing and Special Inspections					
	<u>Testing and Materials</u>					
	Testing and Materials	500	1,000	LS	1,500	
						1,500
2A	Demolition					
	<u>Site Demolition</u>					
	Demolition of existing for new fire lane & off-site improvements	6,430	80,862	LS	87,292	
	Total Demolition					87,292
3A	Concrete					
	<u>Site Concrete</u>					
	Vertical Curb Transition A to type C	24		LF	528	
	Install Concrete Single Curb (MAG STD. No. 222 Type A)	320	1,022	LF	20,291	
	Concrete Vertical curb and gutter (MAG No. 220-1 Type A)	96	1,081	LF	25,894	
	Truncated Dome's at ADA Ramp premium	80		SF	640	
	MAG Standard drives	2,137		SF	17,096	
	Speed Bumps		1	EA	1,500	
	Cross Walk Speed Table		506	SF	4,554	
	Sidewalk Ramp, Type A	2,589		SF	13,874	
	Concrete Spillway	4		EA	30,000	
	<u>Misc. Concrete</u>					
	Grouted Rip Rap	96		SF	1,152	
	Total Concrete					115,529
26A	Electrical					
	<u>Site Electrical</u>					
	Primary and secondary feeders		1	LS	38,500	
	Total Electrical					38,500
31A	Earthwork					
	<u>Grading</u>					
	Mobilization, Mass Grading	1	1	EA	7,186	
	Mass Grading		4,320	SY	14,125	
	Fine Grading	5,805	31,275	SF	9,085	
	<u>Asphalt Pavement</u>					
	Mobilization, Asphalt Pavement	1	1	EA	5,389	
	Install Asphaltic concrete pavement (3" A.C. (3/4") over 7" A.B.C)		3,475	SY	80,794	
	Asphalt Patch, Off-Site	645		SY	58,050	
	<u>Striping & Signage</u>					
	Fire Lane, Curb Paint	170	2,108	LF	2,506	
	Directional Arrows	2	6	EA	591	
	<u>Misc. Earthwork</u>					
	Traffic Control, Barricades	8		Weeks	13,440	
	Dust Control, Water Truck Driver	32		Hours	960	
	SWPPP Establishment	1		Acres	1,183	
	SWPPP Maintenance	1		Months	174	
	Street Sweeping	8		Weeks	5,760	
	Construction Water	4,320		SY	1,512	
	Total Earthwork					200,753
33A	Site Utilities					
	<u>Fire</u>					
	Tapping Sleeve, Valve Box, & Cover	1		EA	10,949	
	Water - 6" Gate valve w/ box, cover, chain	3		EA	20,171	
	Fire Line, DIP 8", plates, align, tie in, t's, backfill, traffic	90		LF	29,413	
	Vert. Re-align fire line to go beneath existing storm MAG370	4		LS	40,000	
	<u>Domestic Water</u>					
	Domestic Water Service w/Meter Box & Cover, 1/2"	1		EA	1,250	
	Domestic Water Service w/Meter Box & Cover, 2"	2		EA	5,260	
	Install water line with extra protection	39		LF	312	
	Inspect and Protect existing lines	31		LF	186	
	Domestic Water Line, 2"	62		LF	2,356	
	<u>Sewer</u>					

Exhibit A.1 - Estimate Detail
 Tempe Unified School District
Frank Elementary School
 June 14, 2018

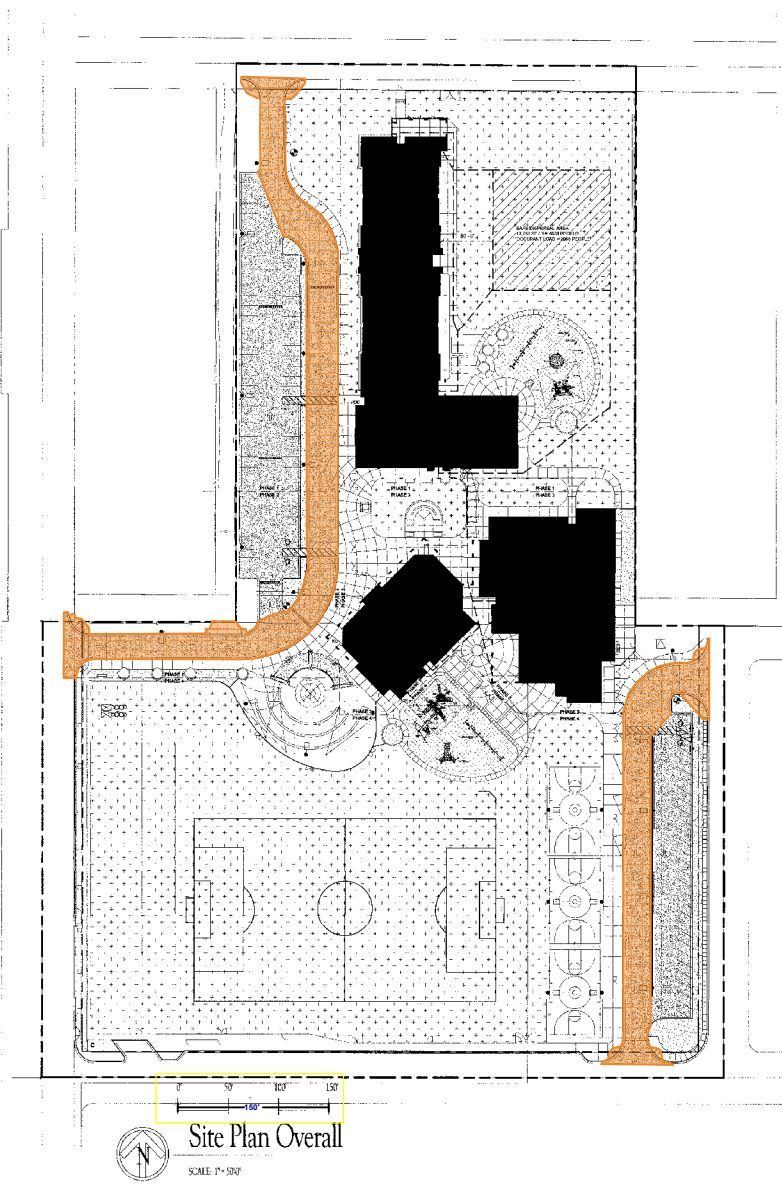


Adjacent Ways

DIV	DESCRIPTION	ADJWAYS OFF-SITE QUANTITY	ADJWAYS ON-SITE QUANTITY	UNIT	TOTAL COST	DIVISION SUM
	Sewer Tap & Sleeve, 8"	1		EA	3,083	
	Sewer Line, 8" pvc	28		LF	1,170	
	Core drill into existing sewer manhole, remove and reform	1		LF	2,500	
	<u>Storm Drain</u>					
	Encase existing storm drain line per MAG404-3	61		LF	7,320	
	<u>Misc Site Utilities</u>					
	Locating Services	24		Hours	3,600	
	Total Site Utilities					127,571

4.7 - 31A Earthwork - 1.1 - mass grading - Q1 4,320 SY

THIS PLAN AND ALL INFORMATION CONTAINED HEREIN ARE THE PROPERTY OF HUNT & CARAWAY ARCHITECTS, P.C. AND ARE NOT TO BE REPRODUCED, COPIED, OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, WITHOUT THE WRITTEN PERMISSION OF HUNT & CARAWAY ARCHITECTS, P.C. ANY VIOLATION OF THIS NOTICE SHALL BE SUBJECT TO LEGAL ACTION.



Site Plan Overall
SCALE: 1" = 50'

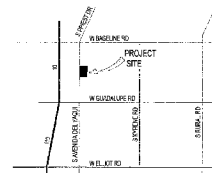
GENERAL NOTES - SITE

1. CONTRACTOR TO VERIFY ALL EXISTING DIMENSIONS AND CONDITIONS BEFORE INSTALLATION AND/OR PAVEMENT.
2. CONTRACTOR TO SUBMIT FIRE ALARM SYSTEM TO TOWN FIRE DEPARTMENT 6700 ADOBE BLVD.
3. CONTRACTOR SHALL PROVIDE ADA COMPLIANCE FOR SIDEWALK CONNECTIONS TO EXISTING SIDEWALK. CONTRACTOR IS TO PROVIDE WITH SIGNIFICATION IF GRASSES ARE NOT ACCEPTABLE. CONTRACTOR TO REFERENCE CIVIL DRAWINGS FOR GRASSING AND DRAINAGE.
4. SEE SHEET A1.5 - A1.11 FOR SITE DETAILS. PLACE CONSTRUCTION SIGN AT FRONT ENTRY TO THE PROJECT FOR WARNING.
5. LOCK BOX (KNOCK BOX) SHALL BE PROVIDED AT ALL EXISTING GATES THAT ARE LOCKABLE. SEE HARDWARE SPECIFICATIONS FOR LOCK BOX TYPE. PROVIDE TOTAL OF 03. CONTRACTOR SHALL COORDINATE BYOFFICE LOCATIONS WITH FIRE MARSHAL PRIOR TO FINAL CITY INSPECTION. SEE NOTE #.
6. ALL FIRE LANE GATES ARE MANUAL AND MUST HAVE MINIMUM OF 22 FEET UNOBSTRUCTED WIDTH IN THE 50 FEET DRIVEWAY POSITION. SEE HARDWARE SET 03 FOR PHOTOS.
7. INSTALL ALL STRENGTHENMENT PARTITIONING SIGNAGE PER GOVERNING ORDINANCES. COORDINATE WITH CIVIL PLANS.
8. SPECIAL SITE SOIL CONDITIONS (SUS). REFER TO CIVIL SPECIFICATIONS & PLANS FOR SPECIFIC SITE CONCRETE THICKNESS & REINFORCEMENT METHODS. SEE STRUCTURE PLAN FOR SOIL ANALYSIS TEST RESULTS.



VICINITY MAP

SCALE: 1" = 1/4"



LEGEND - SITE PLAN

- NEW ASPHALT PARKING AND DRIVEWAY - SEE CIVIL
- NEW CONCRETE SIDEWALK / SITE AMENITIES - SEE CIVIL
- NEW DECOMPOSED GRANITE - SEE LANDSCAPE
- NEW TURF - SEE LANDSCAPE
- IC CONCRETE SIDEWALK
- ARTIFICIAL TURF
- WOOD CHIPS - SEE LANDSCAPE
- SAND FOR SANDBOX - SEE LANDSCAPE
- SITE BUILDINGS
- PHASING
- ELECTRICAL TRANSFORMER / UTILITY EQUIPMENT. PROVIDE 4' CONCRETE HOUSING/KEEPING PAD IF LARGER THAN EQUIP. FOOTPRINT OR PER UTILITY COMPANY REQUIREMENT.
- WATER / IRRIGATION EQUIPMENT
- SITE / FIRE LANE SIGNAGE PER REGULATORY REQUIREMENTS
- PARKING / SITE LIGHTING POLE W/ 2 DIA. X 50 FT HIGH RAISED CONCRETE BASE - SEE ELEC. PLANS
- FIRE HYDRANT LOCATION
- LIGHT POLLARD FIXTURE - SEE ELEC. SITE PLANS
- ACCESSIBLE ENTRANCE AND EXIT WAY
- NEW 20' X 2' ACCESS GATE
- KEYNOTES - SEE THIS SHEET
- FDC FIRE DEPARTMENT CONNECTION - SEE CIVIL PLANS
- KB KNOCK BOX LOCATION - COORDINATE WITH FIRE MARSHAL
- P PAVING DEVICE AT ACCESS GATE

PARKING SUMMARY:

PARKING STALLS (PROVIDED)	60 SPACES
ACCESSIBLE PARKING (REQUIRED) PER I.D.C. 2010 TARI P. 1101.1	4 SPACES
ACCESSIBLE PARKING (PROVIDED)	4 SPACES
ONE IN EVERY EIGHT ACCESSIBLE SPACES SHALL BE DESIGNATED "VAN ACCESSIBLE" PER 2010 ADA STANDARDS FOR ACCESSIBLE DESIGN, SECTION 206.4 (REQUIRED)	1 SPACES
"VAN ACCESSIBLE" PARKING (PROVIDED)	2 SPACES
TOTAL SPACES PROVIDED	67 SPACES

BUILDING USE:

ELEMENTARY SCHOOL WITH PRE-K THRU 5 GRADES.

BUILDING SUMMARY:

NOTE: DOES NOT INCLUDE CANOPY AREAS OR OPEN AIR COVERED BREEZEWAYS OR ALL CANOPIES AND COVERED BREEZEWAYS ARE MADE OF NON-COMBUSTIBLE MATERIALS.

BLDG 100B & 101B: 1 STORY, TYPE V-B, AFES, 32' TALL FLOOR AREA: 30,500 S.F. (ADMIN & LEARNING COMMONS)

BLDG 101: 2 STORY, TYPE V-B, AFES, 32' TALL FLOOR AREA: 48,804 S.F. (CLASSROOM BUILDING)

TOTAL CAMPUS: 79,304 S.F.

HUNT & CARAWAY ARCHITECTS



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Tempe Unified School District
8409 S. Avenida del Yaqui
Guadalupe, AZ 85283

Overall Site Plan

Revisions:
1. QCQA 4/11/18

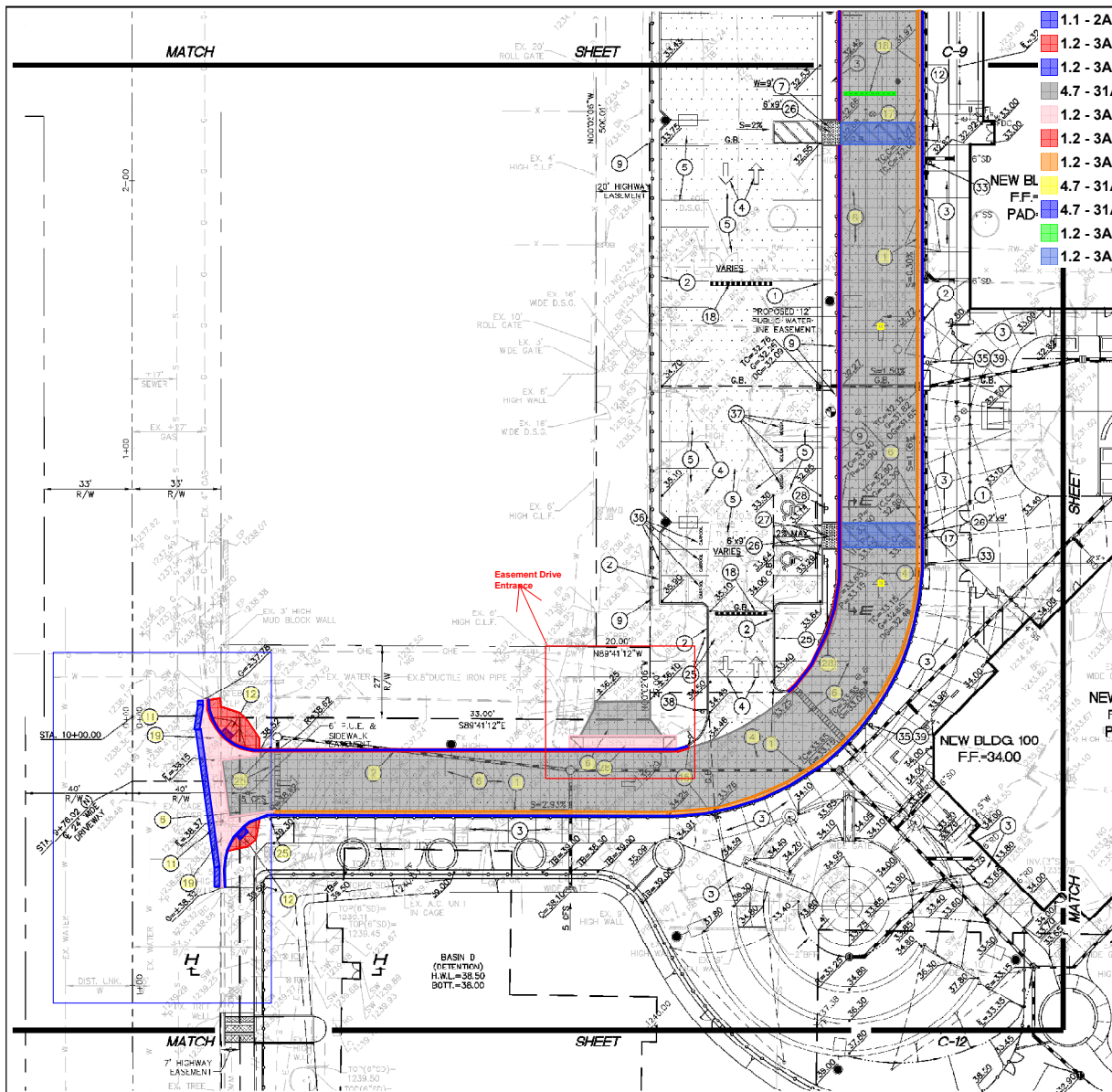
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Issue: Construction Set



JOB # 17-008

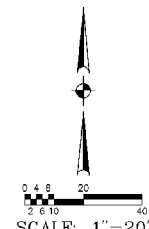
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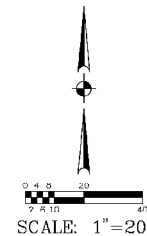
- 1.1 - 2A Demolition - 11 - Sawcut, remove and replace 2' of existing A.C. Pavement - Q1 16 SY
- 1.2 - 3A Concrete - 12 - Sidewalk Ramp, Type 'A' - Q1 264 SF
- 1.2 - 3A Concrete - 12 - Truncated Domes Premium - Q1 18 SF
- 4.7 - 31A Earthwork - 06 - Install Asphaltic concrete pavement (3" A.C. (3/4") over 7" A.B.C.) - Q1 1,472 SY
- 1.2 - 3A Concrete - 19 - Concrete Drive Entrance - Q1 676 SF
- 1.2 - 3A Concrete - 02 - Install Concrete Single Curb (MAG STD. No. 222 Type A) - Q1 439 LF
- 1.2 - 3A Concrete - 01 - Concrete Vertical curb and gutter (MAG No. 220-1 Type A) - Q1 500 LF
- 4.7 - 31A Earthwork - 04 - Striping Arrow on Pavement - Q1 2 EA
- 4.7 - 31A Earthwork - 04 - Fire Lane Striping - Q1 978 LF
- 1.2 - 3A Concrete - 18 - Speed Bump - Q1 19 LF
- 1.2 - 3A Concrete - 17 - Install Speed Table - Q1 506 SF

- 5 INSTALL ASPHALTIC CONCRETE PAVEMENT (2.5" A.C. (3/4" INCH) OVER 6" A.B.C.) IN PARKING STALLS.
- 6 INSTALL ASPHALTIC CONCRETE PAVEMENT (3" A.C. (3/4" INCH) OVER 7" A.B.C.) IN DRIVEWAY AREAS.
- 7 INSTALL DRAIN THROUGH LANDSCAPE AREA (SEE DETAIL ON SHEET C-2).
- 8 SITE WALL (SEE ARCHITECTURAL AND STRUCTURAL DRAWINGS).
- 9 NEW SITE FENCING (SEE ARCHITECTURAL PLANS).
- 10 INSTALL 2" WIDE CONCRETE SKIRT AT BUILDING PERIMETER (MAG STANDARD DETAIL NO. 230).
- 11 SAWCUT, REMOVE AND REPLACE 2' OF EXISTING A.C. PAVEMENT IN KIND.
- 12 CONSTRUCT SIDEWALK RAMP, TYPE 'A' (SEE DETAIL SHEET C-2).
- 13 INSTALL CURB (TRANSITION TYPE A 10 TYPE C) (MAG STANDARD DETAIL NO. 221).
- 14 CHAIN BARRIER GATE (SEE ARCHITECTURAL DRAWINGS).
- 15 INSTALL "DO NOT ENTER" SIGN (M.U.T.C.D. R3-1, WITH POST AND BASE PER MAG STANDARD DETAIL NO. 131, TYPE 'C').
- 16 INSTALL GROUTED RIP-RAP EROSION PROTECTION. HAND PLACE STONE IN CONCRETE FOR A NEAT CLEAN LOOK.
- 17 INSTALL SPEED TABLE PER SECTION E-E (SEE DETAIL ON SHEET C-2).
- 18 INSTALL SPEED BUMP (SEE DETAIL ON SHEET C-2).
- 19 INSTALL CONCRETE VALLEY CUTTER AND APRON (MAG STANDARD DETAIL NO. 240).
- 25 PIPE BOLLARDS AND CHAIN (SEE ARCHITECTURAL PLANS FOR DETAILS).
- 26 TRUNCATED DOMES PER ADAAG REQUIREMENTS.
- 27 CONSTRUCT SIDEWALK RAMP, TYPE 'B' (SEE DETAIL ON SHEET C-2).
- 28 INSTALL HANDICAP PARKING SIGN PER TOWN OF GUADALUPE REQUIREMENTS. POST AND BASE PER MAG STANDARD DETAIL NO. 131, TYPE 'C').
- 29 2.5' HIGH MAXIMUM RETAINING WALL WITH 6" HIGH CHAIN LINK FENCE (SEE ARCHITECTURAL AND STRUCTURAL DRAWINGS).
- 30 SEE ARCHITECTURAL PLANS FOR STEPS.
- 31 INSTALL "STOP" SIGN (M.U.T.C.D. R1-1 (30"x30"), WITH POST AND BASE PER MAG STANDARD DETAIL NO. 131, TYPE 'C').
- 32 INSTALL "BUSES ONLY BEYOND THIS POINT" SIGN (18"x18") WITH POST AND BASE PER MAG STANDARD DETAIL NO. 131, TYPE 'C').
- 33 INSTALL "NO PARKING - STUDENT DROP-OFF" SIGN (12" WIDE X 18" HIGH) WITH POST AND BASE PER MAG STANDARD DETAIL NO. 131, TYPE 'C').
- 34 INSTALL "BUS LOADING ZONE" SIGN (12" WIDE X 18" HIGH) WITH POST AND BASE PER MAG STANDARD DETAIL NO. 131, TYPE 'C').
- 35 INSTALL SPEED LIMIT 10 SIGN (M.U.T.C.D. R2-1-10, 18" WIDE X 24" HIGH) WITH POST AND BASE PER MAG STANDARD DETAIL NO. 131, TYPE 'C').
- 36 PAINT "CARPOOL" ON PAVEMENT IN ONE FOOT (1') HIGH BLOCK LETTERS. PAINT CURB YELLOW WITH "CARPOOL" IN BLACK ON FACE OF CURB ON EACH STALL (3 EACH).
- 37 PAINT "VISITOR" ON PAVEMENT IN ONE FOOT (1') HIGH BLOCK LETTERS. PAINT CURB YELLOW WITH "VISITOR" IN BLACK ON FACE OF CURB ON EACH STALL (3 EACH).
- 38 INSTALL LEFT TURN ONLY SIGN (M.U.T.C.D. R3-5L, 30" WIDE X 36" HIGH) WITH POST AND BASE PER MAG STANDARD DETAIL NO. 131, TYPE 'C').
- 39 INSTALL "PULL FORWARD" SIGN (12" WIDE X 18" HIGH) WITH POST AND BASE PER MAG STANDARD DETAIL NO. 131, TYPE 'C').
- 40 SAWCUT, REMOVE AND REPLACE 2' MINIMUM OF EXISTING A.C. PAVEMENT. REPLACEMENT SECTION SHALL BE PER MAG SPECIFICATIONS SECTION 336 AND MAG STANDARD DETAIL NO. S 200-1, 200-2 "T-TOP" OR REPLACE IN KIND, WHICHEVER IS GREATER.
- 41 SAWCUT, REMOVE AND REPLACE EXISTING CONCRETE VERTICAL CURB AND GUTTER TO THE NEAREST JOINT OR AS DIRECTED BY TOWN INSPECTOR (MAG STANDARD DETAIL NO. 220-1, TYPE A).
- 42 SAWCUT AND REMOVE EXISTING ROLL CURB AND GUTTER. INSTALL VERTICAL CURB AND GUTTER PER MAG STANDARD DETAIL NO. 220-1, TYPE A AND CURB TRANSITION PER MAG STANDARD DETAIL NO. 222, AS NEEDED FOR THE CONSTRUCTION OF NEW SCUPPER.
- 43 CONSTRUCT 2.5' WIDE SCUPPER (MAG STANDARD DETAIL NO. 203).
- 44 CONSTRUCT CONCRETE SPLASHPAD (SEE DETAIL ON SHEET C-12).
- 45 CONSTRUCT CONCRETE SPILLWAY (SEE DETAIL ON SHEET C-3).
- 46 CONSTRUCT THREE 2.5' WIDE SCUPPERS IN SERIES (MAG STANDARD DETAIL NO. 203, MUFFLED TO HAVE A 2" DEPRESSED FLOW LINE ELEVATION (H+5"), THE CENTERLINE OF EACH SCUPPER SHALL HAVE 3.5' OF SEPARATION BETWEEN THEM.
- 47 INSTALL 6" HIGH BY 2.5' WIDE OPENING IN WALL.



GRADING AND DRAINAGE PLAN				
TEMPE ELEMENTARY SCHOOL DISTRICT NO. 3				
SITE IMPROVEMENTS FOR FRANK ELEMENTARY SCHOOL				
DRAWING STATUS	DATE	BY	CHK'D	APP'D
100% SET	10	23		
DATE	04-27-18			





7. A.B.C.'S IN DRIVEWAY AREAS.
8. INSTALL DRAIN THROUGH LANDSCAPE AREA (SEE DETAIL ON SHEET 0-2).
9. SITE WALL (SEE ARCHITECTURAL AND STRUCTURAL DRAWINGS).
10. NEW SITE FENCING (SEE ARCHITECTURAL PLANS).
11. INSTALL 2" WIDE CONCRETE SKIRT AT BUILDING PERIMETER (MAG STANDARD DETAIL NO. 230).
12. SAWCUT, REMOVE AND REPLACE 2" OF EXISTING A.C. PAVEMENT IN KIND.
13. CONSTRUCT SIDEWALK RAMP, TYPE "A" (SEE DETAIL SHEET C.2).
14. INSTALL CURB TRANSITION TYPE A TO TYPE C (MAG STANDARD DETAIL NO. 221).
15. CHAIN BARRIER GATE (SEE ARCHITECTURAL DRAWINGS).
16. INSTALL "DO NOT ENTER" SIGN (MAG I.C.U. PG. 1, WITH POST) AND BARRIER (MAG STANDARD DETAIL NO. 131, TYPE C2).

DRO	JOB NO. 1705-02
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AVG OVER 4" ABC (MAG AA)

- (23) INSTALL CONCRETE DRIVEWAY ENTRANCE (MAG STANDARD DETAIL NO. 250).
- (24) CONSTRUCT CONCRETE PLAYCOURTS (SEE DETAIL ON SHEET C-10).
- (25) PIPE BULLHEADS AND CHAIN (SEE ARCHITECTURAL PLANS FOR DETAILS).
- (26) TRUNCATED DORIES PER ADAAS REQUIREMENTS.
- (27) CONSTRUCT SIDEWALK RAMP, TYPE "Y" (SEE DETAIL ON SHEET C-2).
- (28) INSTALL HANDCAP PARKING SIGN PER TOWN OF GUADALUPE REQUIREMENTS. POST AND BASE PER MAG STANDARD DETAIL NO. 131, TYPE "C".
- (29) 2.5' HIGH MAXIMUM RETAINING WALL WITH 6" HIGH CHAIN LINK FENCE (SEE ARCHITECTURAL AND STRUCTURAL DRAWINGS).
- (30) SEE ARCHITECTURAL PLANS FOR STEPS.
- (31) INSTALL "STOP" SIGN (M.U.T.C.D. R1-1 (30"x30"), WITH POST AND BASE PER MAG STANDARD DETAIL NO. 131, TYPE "C".
- (32) INSTALL "BUSES ON Y BEYOND THIS POINT" SIGN (18"x18") WITH POST AND BASE PER MAG STANDARD DETAIL NO. 131, TYPE "C".
- (33) INSTALL "NO PARKING - STUDENT DROP-OFF" SIGN (12" WIDE X 18" HIGH) WITH POST AND BASE PER MAG STANDARD DETAIL NO. 131, TYPE "C".
- (34) INSTALL "BUS LOADING ZONE" SIGN (12" WIDE X 18" HIGH) WITH POST AND BASE PER MAG STANDARD DETAIL NO. 131, TYPE "C".
- (35) INSTALL SPEED LIMIT 10 SIGN (M.U.T.C.D. R2-1-10, 18" WIDE X 24" HIGH) WITH POST AND BASE PER MAG STANDARD DETAIL NO. 131, TYPE "C".
- (36) PAINT "CARPOOL" ON PAVEMENT IN ONE FOOT (1') HIGH BLOCK LETTERS. PAINT CURB ON CURB WITH "CARPOOL" IN BLACK ON FACE OF CURB ON EACH STALL (3 EACH).
- (37) PAINT "VISITOR" ON PAVEMENT IN ONE FOOT (1') HIGH BLOCK LETTERS. PAINT CURB YELLOW WITH "VISITOR" IN BLACK ON FACE OF CURB ON EACH STALL (3 EACH).
- (38) INSTALL LEFT TURN ONLY SIGN (M.U.T.C.D. R3-5J, 36" WIDE X 36" HIGH) WITH POST AND BASE PER MAG STANDARD DETAIL NO. 131, TYPE "C".
- (39) INSTALL "PULL FORWARD" SIGN (12" WIDE X 18" HIGH) WITH POST AND BASE PER MAG STANDARD DETAIL NO. 131, TYPE "C".
- (40) SAWCUT, REMOVE AND REPLACE 2' MINIMUM OF EXISTING A.C. PAVEMENT. REPLACEMENT SECTION SHALL BE PER MAG SPECIFICATIONS SECTION 336 AND MAG STANDARD DETAIL NO. S-200-1, 200-2, 200-3 OR REPLACE IN KIND, WHICHEVER IS GREATER.
- (41) SAWCUT, REMOVE AND REPLACE EXISTING CONCRETE VERTICAL CURB AND GUTTER TO THE NEAREST JOINT OR AS DIRECTED BY TOWN INSPECTOR (MAG STANDARD DETAIL NO. 220-1, TYPE A).
- (42) SAWCUT AND REMOVE EXISTING ROLL CURB, GUTTER, INSTALL VERTICAL CURB AND OUTLET PER MAG STANDARD DETAIL NO. 220-1, TYPE A. CURB TRANSITION PER MAG STANDARD DETAIL NO. 222, AS NEEDED FOR THE CONSTRUCTION OF NEW SCUPPER.
- (43) CONSTRUCT 2.5' WIDE SCUPPER (MAG STANDARD DETAIL NO. 200).
- (44) CONSTRUCT CONCRETE SPLASH-PAV (SEE DETAIL ON SHEET C-10).
- (45) CONSTRUCT CONCRETE SPILLWAY (SEE DETAIL ON SHEET C-3).
- (46) CONSTRUCT THREE 2.5' WIDE SCUPPERS IN SERIES (MAG STANDARD DETAIL NO. 203). MODIFIED TO HAVE A 2" DEEPENED FLOW LINE (FLW) ON (144") THE CENTERLINE OF EACH SCUPPER SHALL HAVE 3" OF SEPARATION BETWEEN THEM.
- (47) INSTALL 6" HIGH BY 2.5' WIDE OPENING IN WALL.

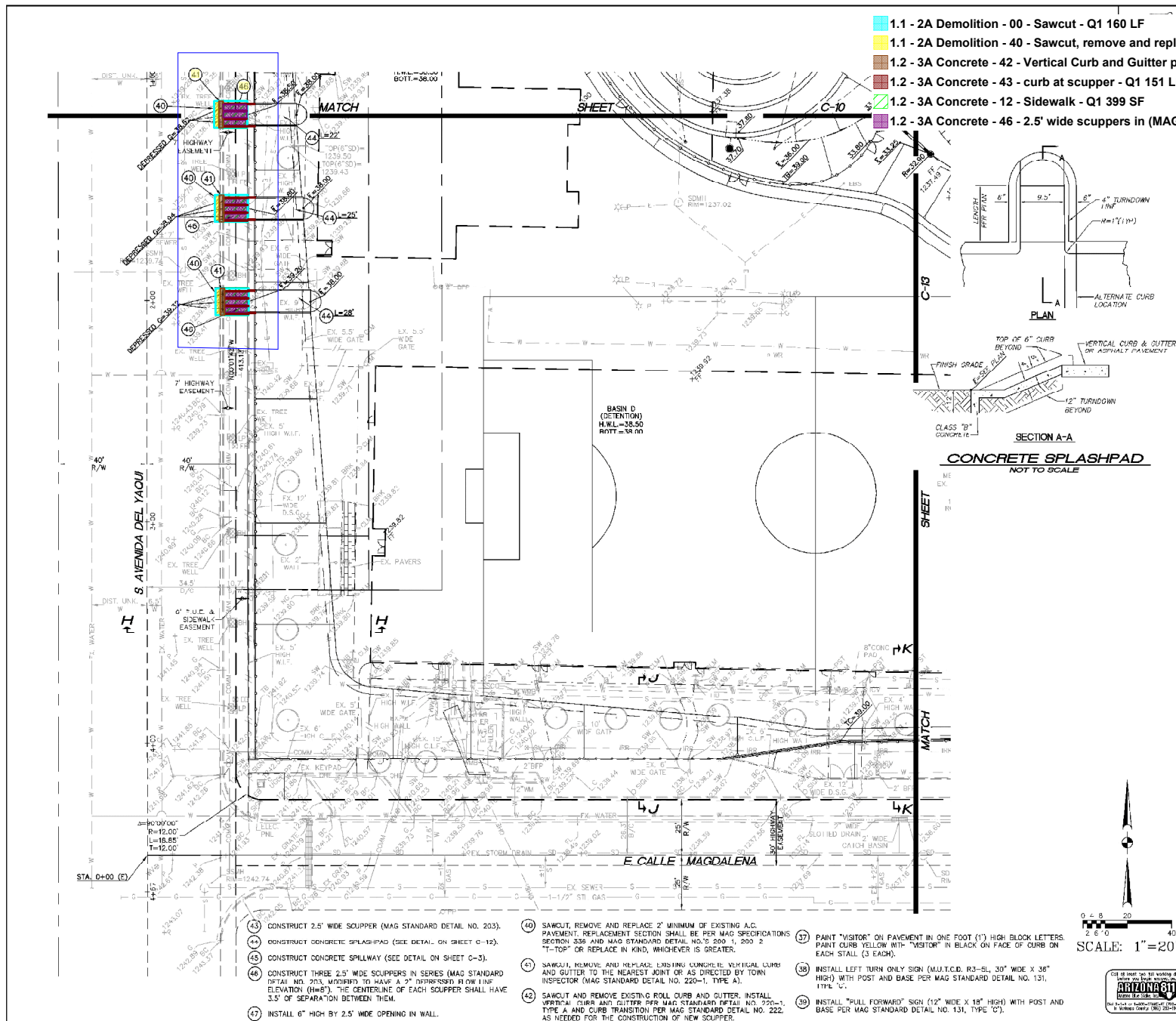
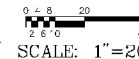
SITE IMPROVEMENTS FOR FRANK ELEMENTARY SCHOOL

DRAWING STATUS		SHEET	OF	C-1
100% SET				
DATE: 04-27-18				
		11	23	



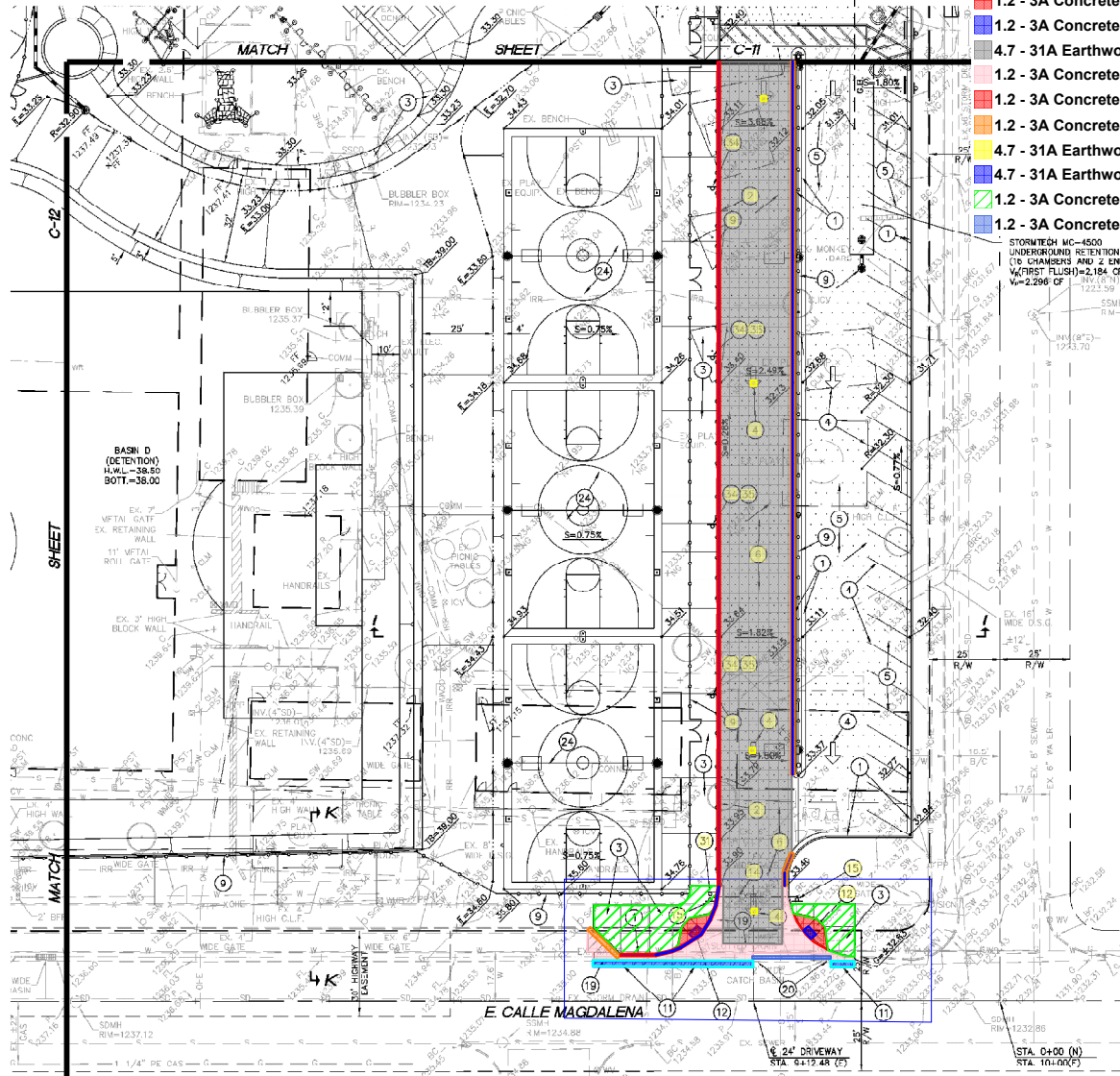
- 2) INSTALL CONCRETE SINGLE CURB (MAG STANDARD DETAIL NO. 222, TYPE "A").
- 3) INSTALL CONCRETE SIDEWALK (MAG STANDARD DETAIL NO. 230). SEE ARCHITECTURAL PLANS FOR SCORING AND FINISH. MAXIMUM CONTRACTION JOINT SPACING SHALL BE 10' ON CENTER.
- 4) PAINT STRIPE THE PARKING TO THE ALIGNMENTS INDICATED INCLUDING ALL CONDITIONAL ARROWS, CROSSWALKS, HANDICAP PARKING SYMBOLS, SPEED BUMPS, ETC.
- 5) INSTALL ASPHALTIC CONCRETE PAVEMENT (2.5" A.C. (3/4" INCH) OVER 8" A.B.C.) IN PARKING STALLS.
- 6) INSTALL ASPHALTIC CONCRETE PAVEMENT (3" A.C. (3/4" INCH) OVER 7" A.B.C.) IN DRIVEWAY AREAS.
- 7) INSTALL DRAIN THROUGH LANDSCAPE AREA (SEE DETAIL ON SHEET C-2).
- 8) SITE WALL (SEE ARCHITECTURAL AND STRUCTURAL DRAWINGS).
- 9) NEW SITE FENCING (SEE ARCHITECTURAL PLANS).
- 10) INSTALL 2" WIDE UNPOURED SKIN AT BUILDING PERIMETER (MAG STANDARD DETAIL NO. 230).
- 11) SAWCUT, REMOVE AND REPLACE 2" OF EXISTING A.C. PAVEMENT IN HAND.
- 12) CONSTRUCT SIDEWALK RAMP, TYPE "A" (SEE DETAIL SHEET C-2).
- 13) INSTALL CURB TRANSITION TYPE A TO TYPE C (MAG STANDARD DETAIL NO. 221).
- 14) CHAIN BARRIER GATE (SEE ARCHITECTURAL DRAWINGS).
- 15) INSTALL "DO NOT ENTER" SIGN (M.U.T.C.D. R-1, WITH POST AND BASE PER MAG STANDARD DETAIL NO. 131, TYPE "C").
- 16) INSTALL GROUDED RIP RAP EROSION PROTECTION. HAND PLACE STONE IN CONCRETE FOR A NEAT EAVE LOCK.
- 17) INSTALL SPEED LIMIT PLATE PER SECTION E-E (SEE DETAIL ON SHEET C-2).
- 18) INSTALL SPEED BUMP (SEE DETAIL ON SHEET C-2).
- 19) INSTALL CONCRETE VALLEY CUTTER AND APRON (MAG STANDARD DETAIL NO. 240).
- 20) EXISTING VALLEY CUTTER, SLOTTED DRAIN AND CATCH BASIN TO REMAIN AND BE PROTECTED.
- 21) PROVIDE HANDRAIL, SAWCUT TO REMOVE VERTICAL CURB WEST OF THE CATCH BASIN AND ROLL CURB WEST OF SLOTTED DRAIN.
- 22) INSTALL 7" THICK CONCRETE PAVING OVER A" A.B.C. (MAG AA CONCRETE).
- 23) INSTALL CONCRETE DRIVEWAY ENTRANCE (MAG STANDARD DETAIL NO. 260).
- 24) CONSTRUCT CONCRETE PLAYCOURTS (SEE DETAIL ON SHEET C--9).
- 25) PIPE BOLLARDS AND CHAIN (SEE ARCHITECTURAL PLANS FOR DETAILS).
- 26) TRUNCATED DUMPS PER ADAAG REQUIREMENTS.
- 27) CONSTRUCT SIDEWALK RAMP, TYPE "B" (SEE DETAIL ON SHEET C-2).
- 28) INSTALL HANDICAP PARKING SIGN PER TYPING OF GUADALUPE REQUIREMENTS. POST AND BASE PER MAG STANDARD DETAIL NO. 131, TYPE "C").
- 29) 2.5' HIGH MAXIMUM RETAINING WALL WITH 8" HIGH CHAIN LINK FENCE (SEE ARCHITECTURAL AND STRUCTURAL DRAWINGS).
- 30) SEE ARCHITECTURAL PLANS FOR STEPS.
- 31) INSTALL "STOP" SIGN (M.U.T.C.D. R-1 (30"x30"), WITH POST AND BASE PER MAG STANDARD DETAIL NO. 131, TYPE "C").
- 32) INSTALL "BUSES ONLY BEYOND THIS POINT" SIGN (18"x30") WITH POST AND BASE PER MAG STANDARD DETAIL NO. 131, TYPE "C").
- 33) INSTALL "NO PARKING - STUDENT DROP-OFF" SIGN (12" WIDE X 18" HIGH) WITH POST AND BASE PER MAG STANDARD DETAIL NO. 131, TYPE "C").
- 34) INSTALL "BUS LOADING ZONE" SIGN (12" WIDE X 18" HIGH) WITH POST AND BASE PER MAG STANDARD DETAIL NO. 131, TYPE "C").
- 35) INSTALL SPEED LIMIT TO SIGN (M.U.T.C.D. R2-1-10, 18" WIDE X 24" HIGH) WITH POST AND BASE PER MAG STANDARD DETAIL NO. 131, TYPE "C").
- 36) PAINT "CARPOOL" ON PAVEMENT IN ONE FOOT (1') HIGH BLOCK LETTERS. PAINT CURB YELLOW WITH "CARPOOL" IN BLACK ON FACE OF CURB ON EACH STALL (3 EACH).

DRAWING STATUS	SHEET	OF	C-12
100% SET			
DATE: 04-27-18			



- 1.1 - 2A Demolition - 11 - Sawcut, remove and replace 2' of existing A.C. Pavement - Q1 14 SY
- 1.1 - 2A Demolition - 00 - Sawcut - Q1 139 LF
- 1.2 - 3A Concrete - 12 - Sidewalk Ramp, Type 'A' - Q1 145 SF
- 1.2 - 3A Concrete - 12 - Truncated Domes Premium - Q1 21 SF
- 4.7 - 31A Earthwork - 06 - Install Asphaltic concrete pavement (3" A.C. (3/4") over 7" A.B.C.) - Q1 880 SY
- 1.2 - 3A Concrete - 19 - Concrete Drive Entrance - Q1 543 SF
- 1.2 - 3A Concrete - 02 - Install Concrete Single Curb (MAG STD. No. 222 Type A) - Q1 341 LF
- 1.2 - 3A Concrete - 01 - Concrete Vertical curb and gutter (MAG No. 220-1 Type A) - Q1 280 LF
- 4.7 - 31A Earthwork - 04 - Striping Arrow on Pavement - Q1 4 EA
- 4.7 - 31A Earthwork - 04 - Fire Lane Striping - Q1 607 LF
- 1.2 - 3A Concrete - 12 - Sidewalk - Q1 847 SF
- 1.2 - 3A Concrete - 20 - Protect existing slotted drain - Q1 28 LF

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- (8) INSTALL ASPHALTIC CONCRETE PAVEMENT (3" A.C. (3/4" INCH) OVER 7" A.B.C.) IN DRIVEWAY AREAS.
- (7) INSTALL DRAIN THROUGH LANDSCAPE AREA (SEE DETAIL ON SHEET C-2).
- (8) SITE WALL (SEE ARCHITECTURAL AND STRUCTURAL DRAWINGS).
- (9) NEW SITE FENCING (SEE ARCHITECTURAL PLANS).
- (10) INSTALL 2" WIDE CONCRETE SKIRT AT BUILDING PERIMETER (MAG STANDARD DETAIL NO. 230).
- (11) SAWCUT, REMOVE AND REPLACE 2' OF EXISTING A.C. PAVEMENT IN KIND.
- (12) CONSTRUCT SIDEWALK RAMP, TYPE 'A' (SEE DETAIL SHEET C-2).
- (13) INSTALL CURB HANDRAIL TYPE A (10 TYPE U) (MAG STANDARD DETAIL NO. 221).
- (14) CHAIN BARRIER GATE (SEE ARCHITECTURAL DRAWINGS).
- (15) INSTALL "DO NOT ENTER" SIGN (M.U.T.C.D. R5-1, WITH POST AND BASE PER MAG STANDARD DETAIL NO. 131, TYPE 'C').
- (16) INSTALL GROUTED RIP-RAP CROSSION PROTECTION. HAND PLACE STONE IN CONCRETE FOR A NEAT CLEAN LOOK.
- (17) INSTALL SPEED TABLE PER SECTION E-E (SEE DETAIL ON SHEET C-2).
- (18) INSTALL SPEED BUMP (SEE DETAIL ON SHEET C-2).
- (19) INSTALL CONCRETE VALLEY GUTTER AND APRON (MAG STANDARD DETAIL NO. 240).
- (20) EXISTING VALLEY GUTTER, SLOTTED DRAIN AND CATCH BASIN TO REMAIN AND BE PROTECTED.
- (21) PROVIDE HORIZONTAL SAWCUT TO REMOVE VERTICAL CURB WEST OF THE CATCH BASIN AND ROLL CURB WEST OF SLOTTED DRAIN.
- (22) INSTALL 7" THICK CONCRETE PAVING OVER 4" A.B.C. (MAG AA CONCRETE).
- (23) INSTALL CONCRETE DRIVEWAY ENTRANCE (MAG STANDARD DETAIL NO. 250).
- (24) CONSTRUCT CONCRETE PLAYCOURTS (SEE DETAIL ON SHEET C-19).
- (25) PIPE BOLLARDS AND CHAIN (SEE ARCHITECTURAL PLANS FOR DETAILS).
- (26) TRUNCATED DOMES PER ADAAG REQUIREMENTS.
- (27) CONSTRUCT SIDEWALK RAMP, TYPE 'B' (SEE DETAIL ON SHEET C-2).
- (28) INSTALL HANDICAP PARKING SIGN PER TOWN OF GUADALUPE REQUIREMENTS. POST AND BASE PER MAG STANDARD DETAIL NO. 131, TYPE 'C').
- (29) 2.5' HIGH MAXIMUM RETAINING WALL WITH 6" HIGH CHAIN LINK FENCE (SEE ARCHITECTURAL AND STRUCTURAL DRAWINGS).
- (30) SEE ARCHITECTURAL PLANS FOR STEPS.
- (31) INSTALL "STOP" SIGN (M.U.T.C.D. R1-1 (30"x30"), WITH POST AND BASE PER MAG STANDARD DETAIL NO. 131, TYPE 'C').
- (32) INSTALL "BUSES ONLY BEYOND THIS POINT" SIGN (10"x18") WITH POST AND BASE PER MAG STANDARD DETAIL NO. 131, TYPE 'C').
- (33) INSTALL "NO PARKING - STUDENT DROP-OFF" SIGN (12" WIDE X 18" HIGH) WITH POST AND BASE PER MAG STANDARD DETAIL NO. 131, TYPE 'C').
- (34) INSTALL "BUS LOADING ZONE" SIGN (12" WIDE X 18" HIGH) WITH POST AND BASE PER MAG STANDARD DETAIL NO. 131, TYPE 'C').
- (35) INSTALL SPEED LIMIT 10 SIGN (M.U.T.C.D. R2-1-10, 18" WIDE X 24" HIGH) WITH POST AND BASE PER MAG STANDARD DETAIL NO. 131, TYPE 'C').
- (36) PAINT "CARPOOL" ON PAVEMENT IN ONE FOOT (1') HIGH BLOCK LETTERS. PAINT CURB YELLOW WITH "CARPOOL" IN BLACK ON FACE OF CURB ON EACH STA. (3 EACH).

SCALE: 1"=20'

GRADING AND DRAINAGE PLAN			
TEMPE ELEMENTARY SCHOOL DISTRICT NO. 3			
SITE IMPROVEMENTS FOR FRANK ELEMENTARY SCHOOL			
DRAWING STATUS	DATE	BY	CHK'D
100% SET			
	13	23	C-13
DATE	04-27-18		

- (43) CONSTRUCT 2.5' WIDE SCUPPER (MAG STANDARD DETAIL NO. 203).
- (44) CONSTRUCT CONCRETE SPLASH-PAD (SEE DETAIL ON SHEET C-12).
- (45) CONSTRUCT CONCRETE SPILLWAY (SEE DETAIL ON SHEET C-3).
- (46) CONSTRUCT THREE 2.5' WIDE SCUPPERS IN SERIES (MAG STANDARD DETAIL NO. 203, MODIFIED TO HAVE A 2" DEPRESSIONED FLOW LINE ELEVATION (H=8"). THE CENTERLINE OF EACH SCUPPER SHALL HAVE 3.5' OF SEPARATION BETWEEN THEM.
- (47) INSTALL 6" HIGH BY 2.5' WIDE OPENING IN WALL.

- (40) SAWCUT, REMOVE AND REPLACE 2' MINIMUM OF EXISTING A.C. PAVEMENT. REPLACEMENT SECTION SHALL BE PER MAG SPECIFICATIONS SECTION 350 AND MAG STANDARD DETAIL NO. 200-1, 200-2 "T-TOP" OR REPLACE IN KIND, WHICHEVER IS GREATER.
- (41) SAWCUT, REMOVE AND REPLACE EXISTING CONCRETE VERTICAL CURB AND GUTTER TO THE NEAREST JOINT OR AS DIRECTED BY TOWN INSPECTOR (MAG STANDARD DETAIL NO. 220-1, TYPE A).
- (42) SAWCUT AND REMOVE EXISTING ROLL CURB AND GUTTER. INSTALL VERTICAL CURB AND GUTTER PER MAG STANDARD DETAIL NO. 220-1, TYPE A, AND CURB TRANSITION PER MAG STANDARD DETAIL NO. 222, AS NEEDED FOR THE CONSTRUCTION OF NEW SCUPPER.

- (37) PAINT "VISITOR" ON PAVEMENT IN ONE FOOT (1') HIGH BLOCK LETTERS. PAINT CURB YELLOW WITH "VISITOR" IN BLACK ON FACE OF CURB ON EACH STA. (3 EACH).
- (38) INSTALL LEFT TURN ONLY SIGN (M.U.T.C.D. R3-5L, 30" WIDE X 36" HIGH) WITH POST AND BASE PER MAG STANDARD DETAIL NO. 131, TYPE 'C').
- (39) INSTALL "PULL FORWARD" SIGN (12" WIDE X 10" HIGH) WITH POST AND BASE PER MAG STANDARD DETAIL NO. 131, TYPE 'C').



PRIVATE SANITARY SEWER LINE

CONSTRUCTION NOTES:

1. INSTALL 4" DIAMETER SEWER MANHOLE WITH 30" DIAMETER FRAME AND COVER (MAG STANDARD DETAIL NO. 420-1, 420-2, 420-3 AND 423-2).
2. FIELD VERIFY THE EXACT LOCATION AND ELEVATION OF EXISTING STORM DRAIN LINE PRIOR TO THE START OF CONSTRUCTION.
3. INSTALL SANITARY SEWER CLEANOUT (SEE DETAIL ON SHEET C-21).
4. CONNECT TO BUILDING SEWER LINE WITH NECESSARY AND APPROPRIATE FITTINGS. SEE BUILDING PLUMBING DRAWINGS FOR EXACT LOCATION AND CONTINUATION.
5. INSTALL 8" P.V.C. (ASTM D3034, SDR-35) SEWER LINE.
6. INSTALL 4" P.V.C. (ASTM D3034, SDR-35) SEWER LINE.
7. CORE DRILL INTO EXISTING SEWER MANHOLE, REMOVE AND REFORM MANHOLE BASE. CONSTRUCT DROP SEWER CONNECTION (MAG STANDARD DETAIL NO. 426, TYPE A). SEAL CONNECTIONS WITH WATERPROOF NON-SHRINKING MORTAR.

8. SAWCUT, REMOVE AND REPLACE EXISTING A.C. PAVEMENT (MAG STANDARD DETAIL NO. 200-1, TYPE "B").
9. SAWCUT, REMOVE AND REPLACE EXISTING CONCRETE ROLL CURB, GUTTER AND SIDEWALK (MAG STANDARD DETAIL NOS. 220-1, TYPE "U" AND 230) TO THE NEAREST JOINT OR AS DIRECTED BY THE TOWN INSPECTOR.
10. INSTALL SANITARY SEWER TWO WAY CLEANOUT (SEE DETAIL ON SHEET C-22).

PRIVATE DOMESTIC WATER LINE

CONSTRUCTION NOTES:

1. INSTALL 3" P.V.C. (SCHEDULE 40 WITH SOLVENT WELD JOINTS) WATER LINE, INCLUDING ALL SCHEDULE 40 BENDS, TEES, FITTINGS AND CONCRETE THRUST BLOCKS.
2. INSTALL 2" REDUCED PRESSURE PRINCIPAL BACKFLOW PREVENTION ASSEMBLY (CITY OF TEMPE STANDARD DETAIL NO. T-213) VERIFY BACKFLOW PREVENTER TYPE WITH CITY OF TEMPE. INSTALL LIFT OFF GUARDHACK ENCLOSURE MODEL GS-3.5(16" X 30" X 30"), OR ENGINEER APPROVED EQUAL ON A 4" THICK CLASS "B" CONCRETE PAD. VERIFY ENCLOSURE IS ACCEPTABLE WITH THE CITY.
3. INSTALL 3" GATE VALVE WITH VALVE BOX AND COVER WITH CHAIN ATTACHMENT (MAG STANDARD DETAIL NO. 39-1, TYPE "C" AND MAG STANDARD DETAIL NO. 270).
4. CONNECT TO BUILDING DOMESTIC WATER LINE WITH NECESSARY AND APPROPRIATE FITTINGS. SEE PLUMBING DRAWINGS FOR EXACT LOCATION AND CONTINUATION.

5. SEE PUBLIC WATER LINE PLANS FOR IN RIGHT OF WAY.
6. INSTALL 4" P.V.C. (RING TIE, CLASS CAST IRON BENDS, TEES, FITTINGS).
7. INSTALL 4" GATE VALVE WITH VALVE BOX AND COVER WITH CHAIN ATTACHMENT (MAG STANDARD DETAIL NO. 39-1, TYPE "C" AND MAG STANDARD DETAIL NO. 270).
8. INSTALL 4" X 4" X 4" TEE.
9. INSTALL 3" X 3" X 3" TEE.
10. INSTALL 4" TO 3" REDUCER.
11. INSTALL 4" TO 2" REDUCER.

5.4 - 33A Site Utilities - S09 - R&R existing curb and gutter - Q1 26 SF

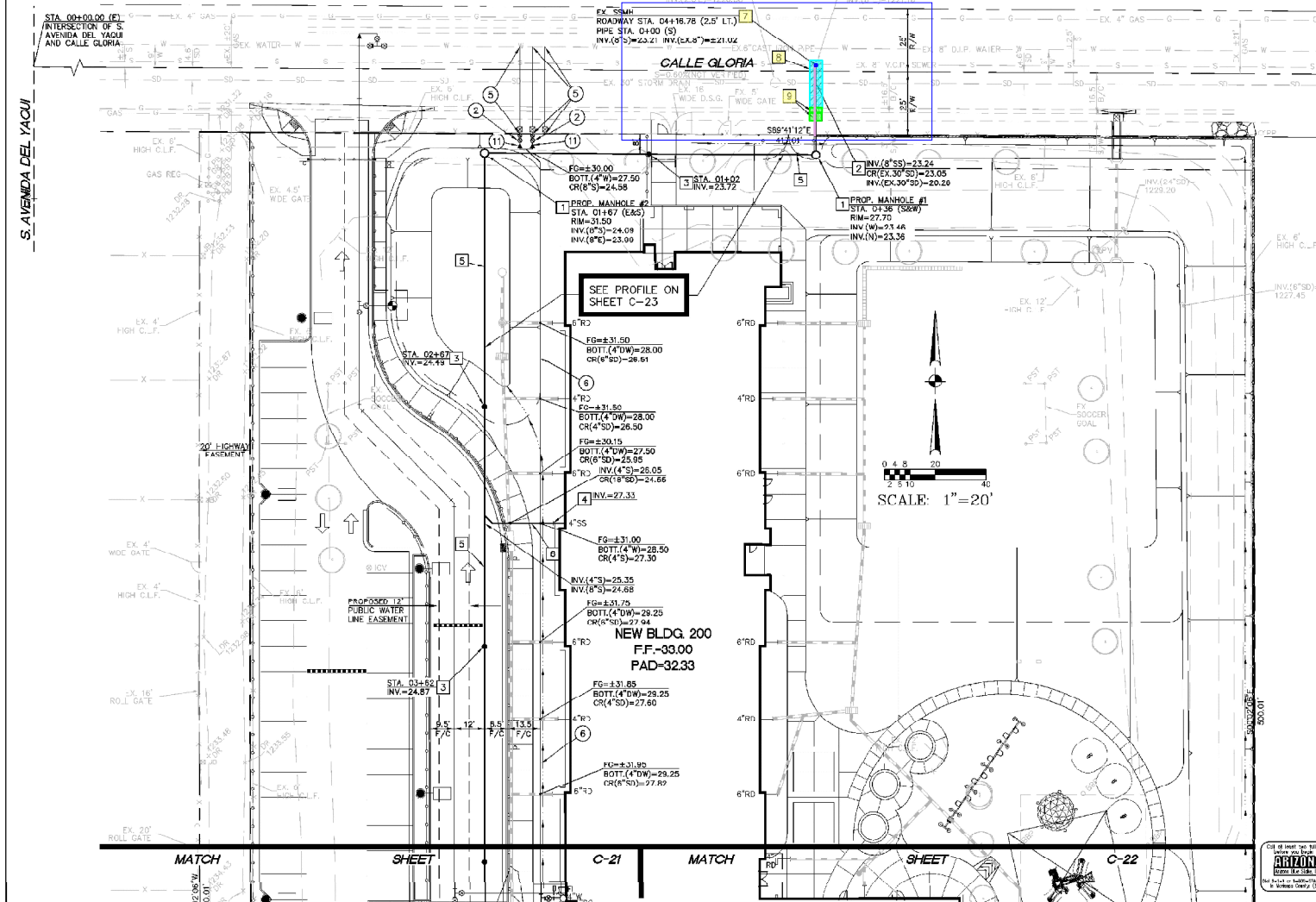
5.4 - 33A Site Utilities - S08 - Sawcut, R&R pavement - Q1 96 SF

5.4 - 33A Site Utilities - S05 - 8" PVC Sewer Line - Q1 28 LF

5.4 - 33A Site Utilities - S07 - Core Drill into existing manhole - Q1 1 EA

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NOTE:
ALL NEW UNDERGROUND UTILITIES (WATER, SEWER, FIRE AND STORM DRAIN LINES) SHALL BE REDDED WITH A.B.C. PER MAG SECTION 702, FROM 4" (MIN.) BELOW THE BOTTOM OF THE PIPE TO 12" (MIN.) ABOVE THE TOP OF THE PIPE.

DOMESTIC WATER LINE THRUST BLOCK NOTE:
ALL THRUST BLOCKS IN THE RIGHT-OF-WAY OR EASEMENT SHALL BE PER M.A.G. S.D. NO. 360. ALL THRUST BLOCKS SHALL BE CONSTRUCTED OF M.A.G. CLASS "C" CONCRETE. FOR ALL DOMESTIC WATER LINE THRUST BLOCKS SHALL BE INSTALLED AT ALL CHANGES IN DIRECTION AS AT TEES AND BENDS, CHANGES IN SIZE AS AT REDUCERS, STOPS AS AT DEAD ENDS AND VALVES. THRUST BLOCKSIZING AND INSTALLATION SHALL FOLLOW IAPMO INSTALL STANDARD 8-92 OF THE ARIZONA STATE PLUMBING CODE, WHICH IS BASED ON THE 84 UPC WITH AMENDMENTS.

UNDERGROUND UTILITY TRACER WIRE NOTE:
ALL NEW UNDERGROUND FACILITIES/UTILITIES SHALL BE INSTALLED WITH A DETECTABLE UNDERGROUND LOCATION DEVICE. INSTALL A #18 INSULATED TRACER WIRE SECURELY ATTACHED TO EACH UTILITY AT 8'-FEET ON CENTER. 12" OF TRACER WIRE SHALL BE ACCESSIBLE ABOVE GRADE AT THE TERMINATION AND SHALL BE SECURELY ATTACHED AT THAT POINT. THE CONTRACTOR SHALL VERIFY WHICH COLOR TO USE FOR STORM DRAIN, WATER, SEWER, ETC., WITH THE CITY OF TEMPE, TOWN OF GUADALUPE AND APPROPRIATE UTILITY COMPANIES. THE CONTRACTOR SHALL INCLUDE ALL COSTS ASSOCIATED WITH THIS REQUIREMENT IN THEIR BID.

DOMESTIC WATER LINE AND PRIVATE SANITARY SEWER LINE PLAN

TEMPE ELEMENTARY SCHOOL DISTRICT NO. 3

SITE IMPROVEMENTS FOR FRANK ELEMENTARY SCHOOL

DRAWING STATUS	DATE	BY	CHK'D	APP'D
100% SET	04-27-18	20	23	C-20



HESS - ROUNTREE, INC.
CONSULTING ENGINEERS & LAND SURVEYORS
8881 SOUTH 61ST STREET, SUITE C110
PHOENIX, ARIZONA 85044 (480)496-0244

DES: **DRO** DRN: **ANM** CKD: **DRO** JOB NO: **1705-02**

PUBLIC WATER LINE CONSTRUCTION NOTES:

1. INSTALL 8" TEE WITH NECESSARY AND APPROPRIATE FITTINGS. FIELD VERIFY SIZE, ELEVATION, LOCATION AND TYPE OF MATERIAL OF THE EXISTING WATER LINE PRIOR TO THE START OF CONSTRUCTION.
2. INSTALL 1/2" TO 6" REDUCER.
3. INSTALL 8" POLYWRAPPED DUCTILE IRON (PRESSURE CLASS 350, CLASS 62) WATER LINE INCLUDING ALL BENDS, TEES, FITTINGS AND THRUST BLOCKS. INSTALL HIGH-DENSITY POLYETHYLENE PER MAG SPECIFICATION SECTION 610.
4. SAWCUT, REMOVE AND REPLACE EXISTING A.C. PAVEMENT. REPLACEMENT SECTION SHALL BE PER MAG SPECIFICATIONS SECTION 336 AND MAG STANDARD DETAIL NO. S 200-1, 200-2 "T-TOP" OR REPLACE IN KING, WHICHEVER IS GREATER.
5. SAWCUT, REMOVE AND REPLACE EXISTING ROLL CURB AND GUTTER TO THE NEAREST JOINT OR AS DIRECTED BY CITY INSPECTOR (MAG STANDARD DETAIL NO. 220-1, TYPE C).
6. SAWCUT, REMOVE AND REPLACE EXISTING CONCRETE SIDEWALK TO THE NEAREST JOINT OR AS DIRECTED BY CITY INSPECTOR (MAG STANDARD DETAIL NO. 230).
7. VERTICALLY REALIGN FIRE LINE TO GO BENEATH EXISTING STORM DRAIN LINE AND SEWER LINE WITH A MINIMUM OF TWO FOOT SEPARATION BETWEEN PIPES (MAG STANDARD DETAIL NO. 370).
8. ENCASE EXISTING STORM DRAIN LINE AND SEWER LINE PER MAG STANDARD DETAIL NO. 404-3.
9. AT WATER LINE CROSSING WITH STORM DRAIN LINE AND SEWER LINE, INSTALL WATER LINE WITH EXTRA PROTECTION PER MAG STANDARD DETAIL NO. S 404-1, 404-2 AND PER MAG SPECIFICATION SECTION 610.5.5.
10. FIELD VERIFY ELEVATION AND LOCATION OF EXISTING STORM DRAIN LINE AND SEWER LINE PRIOR TO THE START OF CONSTRUCTION.
11. INSTALL 8" GATE VALVE WITH VALVE BOX AND COVER WITH CHAIN ATTACHMENT (MAG STANDARD DETAIL NO. 381-1, TYPE "C" AND MAG STANDARD DETAIL NO. 270).
12. INSTALL 6" GATE VALVE WITH VALVE BOX AND COVER WITH CHAIN ATTACHMENT (MAG STANDARD DETAIL NO. 381-1, TYPE "C" AND MAG STANDARD DETAIL NO. 270).
13. REMOVE EXISTING 90" BEND, WATER LINE, FIRE HYDRANT AND GATE VALVE AS NEEDED FOR INSTALLATION OF NEW 8" WATER LINE.

- OFF-SITE UTILITIES - 04 - Sawcut R&R Pavement - Q1 82 SY
- OFF-SITE UTILITIES - 6 - Sawcut & R&R concrete Sidewalk - Q1 4 SY
- OFF-SITE UTILITIES - 05 - Concrete R&R - Q1 106 SF
- OFF-SITE UTILITIES - W03 - Sawcut, R&R Paving - Q1 40 SY
- OFF-SITE UTILITIES - Public W03 - 8" Polywrapped Ductile Iron Water Line - Q1 47 LF
- OFF-SITE UTILITIES - 8 - Encase existing storm and sewer in concrete - Q1 41 LF
- OFF-SITE UTILITIES - 09 - Install water line with extra protection - Q1 39 LF
- OFF-SITE UTILITIES - W01 - 2" Domestic Water Service - Q1 62 LF
- OFF-SITE UTILITIES - 08 - INSTALL NEW 1 1/2" WATER SERVICE - Q1 0 SF
- OFF-SITE UTILITIES - 06 - Inspect and Protect existing lines - Q1 31 LF
- OFF-SITE UTILITIES - 7 - Vertically align fire line to go beneath Storm and Sewer - Q1 2 EA
- OFF-SITE UTILITIES - 12 - 6" Gate valve w/ box, cover, chain - Q1 3 EA
- OFF-SITE UTILITIES - 01 - 6" Tee w/ fittings - Q1 1 EA
- OFF-SITE UTILITIES - 2 - 8" to 6" reducer - Q1 1 EA
- OFF-SITE UTILITIES - W01 - 2" Water meter w/ box - Q1 2 EA
- OFF-SITE UTILITIES - 08 - 1/2" Water Meter & Service - Q1 1 EA
- 5.4 - 33B Off-site Utilities - W04 - Sawcut and replace conc. roll curb and gutter MAG220-1 - Q1 50 SF

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OFFSITE DOMESTIC WATER LINE CONSTRUCTION NOTES:

1. INSTALL NEW 2" DOMESTIC WATER SERVICE, AND 2" WATER METER WITH METER BOX AND COVER (CITY OF TEMPE STANDARD DETAIL NO. T-212 AND T-212-A). CONTRACTOR TO COORDINATE PAYMENT OF NECESSARY FEES WITH THE OWNER AND CITY OF TEMPE.
2. SEE ONSITE UTILITY PLANS FOR THE INSTALLATION OF 2" REDUCED PRESSURE PRINCIPAL BACKFLOW PREVENTION ASSEMBLY (CITY OF TEMPE STANDARD DETAIL NO. T-213) AND CONTINUATION OF DOMESTIC WATER LINE. VERIFY BACKFLOW PREVENTER TYPE WITH CITY OF TEMPE. INSTALL LIFT OFF GUARD-RACK ENCLOSURE MODEL GS-3.30" W X 30" H X 30" L, OR ENGINEER APPROVED EQUIV. ON A 4" THICK CLASS "B" CONCRETE PAD (VERIFY WITH CITY THAT IT MEETS THEIR STANDARDS).
3. SAWCUT, REMOVE AND REPLACE EXISTING A.C. PAVEMENT (MAG SPECIFICATION SECTION 336 AND MAG STANDARD DETAIL NO. 200-1, "T TOP" OR MATCH EXISTING, WHICHEVER IS GREATER).
4. SAWCUT, REMOVE AND REPLACE EXISTING CONCRETE ROLL CURB AND GUTTER TO THE NEAREST JOINT OR AS DIRECTED BY THE CITY INSPECTOR (MAG STANDARD DETAIL NO. 220-1, TYPE C).
5. SAWCUT, REMOVE AND REPLACE EXISTING CONCRETE SIDEWALK TO THE NEAREST JOINT OR AS DIRECTED BY THE CITY INSPECTOR (MAG STANDARD DETAIL NO. 230).
6. FIELD VERIFY ELEVATION AND LOCATION OF EXISTING STORM DRAIN LINE AND SEWER LINE PRIOR TO THE START OF CONSTRUCTION. PROTECT FROM DAMAGE.
7. COORDINATE WITH CITY OF TEMPE WATER DEPARTMENT FOR REMOVAL/ABANDONMENT OF EXISTING WATER METERS AND SERVICES. INSTALL WATER TIGHT CAP AT WATER MAIN.
8. INSTALL NEW 1-1/2" WATER SERVICE AND 1-1/2" WATER METER WITH METER BOX AND COVER FOR LANDSCAPE IRRIGATION. CONTRACTOR TO COORDINATE PAYMENT OF NECESSARY FEES WITH THE OWNER AND CITY OF TEMPE. SEE LANDSCAPE "LAND" FOR INSTALLATION OF BACKFLOW PREVENTION.
9. EXISTING 2" WATER SERVICE, 2" WATER METER WITH METER BOX AND COVER AND 2" BACKFLOW PREVENTION ASSEMBLY TO REMAIN AND BE

PRIVATE FIRE LINE THRUST BLOCK NOTE:

ALL PRIVATE FIRE LINE THRUST BLOCKS SHALL BE CONSTRUCTED OF M.A.C. CLASS 0 CONCRETE. FOR ALL PRIVATE FIRE LINE THRUST BLOCKS THE AREA OF BEARING FACE SHALL BE PER NFPA-24. THE FOLLOWING CHART IS FROM NFPA-24.

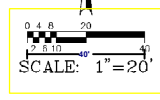
PIPE SIZE (IN.)	90° BEND (SQ.FT.)	45° BEND (SQ.FT.)	TEES, PLUGS, CAPS AND HYDRANTS (SQ.FT.)
4	2	2	2
6	2	2	4
8	8	5	6
10	13	7	9
12	18	10	13
14	25	14	18
16	32	18	23

NOTE:

ALL NEW UNDERGROUND UTILITIES (WATER, SEWER, FIRE AND STORM DRAIN LINES) SHALL BE BEDDED WITH A.B.C., PER MAG SECTION 702, FROM 4" (MIN.) BELOW THE BOTTOM OF THE PIPE TO 12" (MIN.) ABOVE THE TOP OF THE PIPE.

UNDERGROUND UTILITY TRACER WIRE NOTE:

ALL NEW UNDERGROUND FACILITIES/UTILITIES SHALL BE INSTALLED WITH A DETECTABLE UNDERGROUND LOCATION DEVICE. INSTALL A #18 INSULATED TRACER WIRE SECURELY ATTACHED TO EACH UTILITY AT 6'-FEET ON CENTER. 12" OF TRACER WIRE SHALL BE ACCESSIBLE ABOVE GRADE AT THE TERMINATION AND SHALL BE SECURELY ATTACHED AT THAT POINT. THE CONTRACTOR SHALL VERIFY WHICH COLOR TO USE FOR STORM DRAIN, WATER, SEWER, ETC., WITH THE CITY OF TEMPE, TOWN OF GUADALUPE AND APPROPRIATE UTILITY COMPANIES. THE CONTRACTOR SHALL INCLUDE ALL COSTS ASSOCIATED WITH THIS REQUIREMENT IN THEIR BID.



WATER LINE PLAN
TEMPE ELEMENTARY SCHOOL DISTRICT NO. 3

SITE IMPROVEMENTS FOR FRANK ELEMENTARY SCHOOL	
DRAWING STATUS	SHHHH' OP'
100% SET	
DATE: 04-27-18	

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OFFSITE DOMESTIC WATER LINE CONSTRUCTION NOTES:

1. INSTALL NEW 2" DOMESTIC WATER SERVICE, AND 2" WATER METER WITH METER BOX AND COVER (CITY OF TEMPE STANDARD DETAIL NO. T-212 AND T-212-A). CONTRACTOR TO COORDINATE PAYMENT OF NECESSARY FEES WITH THE OWNER AND CITY OF TEMPE.
2. SEE ONSITE UTILITY PLANS FOR THE INSTALLATION OF 2" REDUCED PRESSURE PRINCIPAL BACKFLOW PREVENTION ASSEMBLY (CITY OF TEMPE STANDARD DETAIL NO. T-213) AND CONTINUATION OF DOMESTIC WATER LINE. VERIFY BACKFLOW PREVENTER TYPE WITH CITY OF TEMPE. INSTALL LIFT OFF GUARDSHACK ENCLOSURE MODEL GS-3.3(16" W X 30" H X 30" D), OR ENGINEER APPROVED EQUAL ON A 4" THICK CLASS "B" CONCRETE PAD (VERIFY WITH CITY THAT IT MEETS THEIR STANDARDS).
3. SAWCUT, REMOVE AND REPLACE EXISTING A.C. PAVEMENT (MAG SPECIFICATION SECTION 336 AND MAG STANDARD DETAIL NO. 200-1, "T" TOP" OR MATCH EXISTING, WHICHEVER IS GREATER).
4. SAWCUT, REMOVE AND REPLACE EXISTING CONCRETE ROLL CURB AND GUTTER TO THE NEAREST JOINT OR AS DIRECTED BY THE CITY INSPECTOR (MAG STANDARD DETAIL NO. 220-1, TYPE C).
5. SAWCUT, REMOVE AND REPLACE EXISTING CONCRETE SIDEWALK TO THE NEAREST JOINT OR AS DIRECTED BY THE CITY INSPECTOR (MAG STANDARD DETAIL NO. 230).
6. FIELD VERIFY ELEVATION AND LOCATION OF EXISTING STORM DRAIN LINE AND SEWER LINE PRIOR TO THE START OF CONSTRUCTION. PROVIDE 1" MIN. VERTICAL.
7. COORDINATE WITH CITY OF TEMPE WATER DEPARTMENT FOR REMOVAL/ABANDONMENT OF EXISTING WATER METERS AND SERVICES.
8. INSTALL NEW 1-1/2" WATER SERVICE AND 1-1/2" WATER METER WITH METER BOX AND COVER FOR LANDSCAPE IRRIGATION. CONTRACTOR TO COORDINATE PAYMENT OF NECESSARY FEES WITH THE OWNER AND CITY OF TEMPE.
9. EXISTING 2" WATER SERVICE, 2" WATER METER WITH METER BOX AND COVER AND 2" BACKFLOW PREVENTION ASSEMBLY TO REMAIN AND BE USED FOR LANDSCAPE IRRIGATION. SEE LANDSCAPE PLANS.

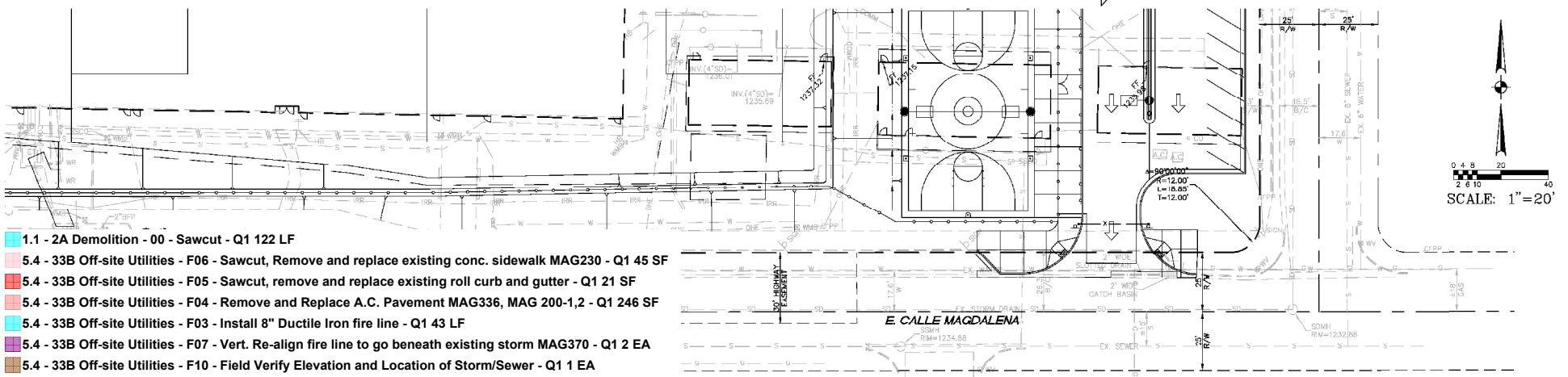
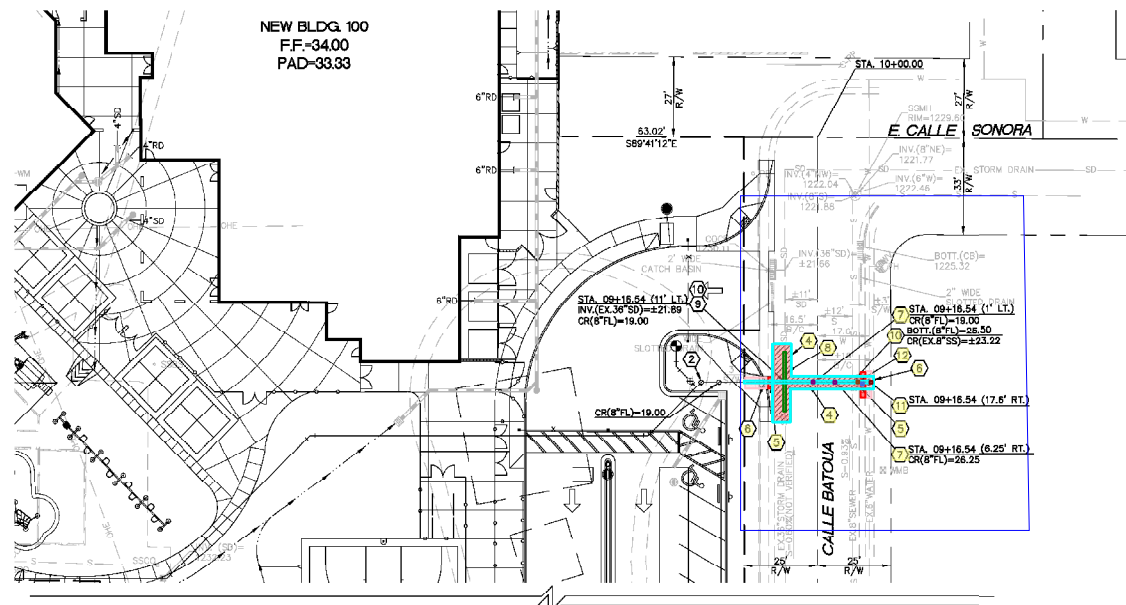
OFFSITE FIRE LINE CONSTRUCTION NOTES:

1. INSTALL 8" X 8" TAPPING SLEEVE AND 8" VALVE WITH VALVE BOX AND COVER (MAG STANDARD DETAIL NO. 340). FIELD VERIFY ELEVATION AND LOCATION OF EXISTING WATER LINE PRIOR TO THE START OF CONSTRUCTION.
2. SEE ONSITE UTILITY PLANS FOR THE INSTALLATION OF AN 8" DOUBLE CHECK VALVE BACKFLOW PREVENTION ASSEMBLY (CITY OF TEMPE STANDARD DETAIL NO. T-214) AND CONTINUATION OF FIRE LINE. VERIFY BACKFLOW PREVENTER TYPE WITH THE CITY OF TEMPE.
3. INSTALL 8" DUCTILE IRON (PRESSURE CLASS 350) WATER LINE INCLUDING ALL BENDS, TEES, FITTINGS AND THRUST BLOCKS.
4. SAWCUT, REMOVE AND REPLACE EXISTING A.C. PAVEMENT. REPLACEMENT SECTION SHALL BE PER MAG SPECIFICATIONS SECTION 336 AND MAG STANDARD DETAIL NO'S 200-1, 200-2 "T-TOP" OR REPLACE IN KING, WHICHEVER IS GREATER.
5. SAWCUT, REMOVE AND REPLACE EXISTING ROLL CURB AND GUTTER TO THE NEAREST JOINT OR AS DIRECTED BY CITY INSPECTOR (MAG STANDARD DETAIL NO. 220-1, TYPE C).
6. SAWCUT, REMOVE AND REPLACE EXISTING CONCRETE SIDEWALK TO THE NEAREST JOINT OR AS DIRECTED BY CITY INSPECTOR (MAG STANDARD DETAIL NO. 230).
7. VERTICALLY REALIGN FIRE LINE TO GO BENEATH EXISTING STORM DRAIN LINE AND SEWER LINE WITH A MINIMUM OF TWO FOOT SEPARATION BETWEEN PIPES (MAG STANDARD DETAIL NO. 370).
8. ENCASE EXISTING STORM DRAIN LINE AND SEWER LINE PER MAG STANDARD DETAIL NO. 404-3.
9. AT FIRE LINE CROSSING WITH STORM DRAIN LINE AND SEWER LINE, INSTALL FIRE LINE WITH EXTRA PROTECTION PER MAG STANDARD DETAIL NO'S 404-1, 404-2 AND RSR MAG SPECIFICATION SECTION 610.5.5.
10. FIELD VERIFY ELEVATION AND LOCATION OF EXISTING STORM DRAIN LINE AND SEWER LINE PRIOR TO THE START OF CONSTRUCTION.
11. INSTALL 6" X 6" TAPPING SLEEVE AND 6" VALVE WITH VALVE BOX AND COVER (MAG STANDARD DETAIL NO. 340). FIELD VERIFY ELEVATION AND LOCATION OF EXISTING WATER LINE PRIOR TO THE START OF CONSTRUCTION.
12. INSTALL 6" TO 6" REDUCER.



HESS - ROUNTREE, INC.
CONSULTING ENGINEERS & LAND SURVEYORS
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PHOENIX, ARIZONA 85044 (480)496-0244

DRS **DRO** DRN **ANM** CKD **DRO** JOB NO. **1705-02**



- 1.1 - 2A Demolition - 00 - Sawcut - Q1 122 LF
- 5.4 - 33B Off-site Utilities - F06 - Sawcut, Remove and replace existing conc. sidewalk MAG230 - Q1 45 SF
- 5.4 - 33B Off-site Utilities - F05 - Sawcut, remove and replace existing roll curb and gutter - Q1 21 SF
- 5.4 - 33B Off-site Utilities - F04 - Remove and Replace A.C. Pavement MAG336, MAG 200-1,2 - Q1 246 SF
- 5.4 - 33B Off-site Utilities - F03 - Install 8" Ductile Iron fire line - Q1 43 LF
- 5.4 - 33B Off-site Utilities - F07 - Vert. Re-align fire line to go beneath existing storm MAG370 - Q1 2 EA
- 5.4 - 33B Off-site Utilities - F10 - Field Verify Elevation and Location of Storm/Sewer - Q1 1 EA
- 5.4 - 33B Off-site Utilities - F12 - Install 8" to 6" Reducer - Q1 1 EA
- 5.4 - 33B Off-site Utilities - F11 - Install 6"x6" tapping sleeve and 6" valve with valve box MAG340 - Q1 1 EA
- 5.4 - 33B Off-site Utilities - F08 - Encase existing storm drain and sewer line - Q1 20 LF

OFFSITE WATER LINE PLAN TEMPE ELEMENTARY SCHOOL DISTRICT NO. 3

SITE IMPROVEMENTS FOR FRANK ELEMENTARY SCHOOL			
DRAWING STATUS	SHEET	OF	
100% SET	3	3	OW-3
DATE:	2-16-18		

