

Engineering Design Guidelines Manual for the Preparation and Checking of Street Improvement, Drainage, and Grading Plans within Imperial County

(Engineering Design Guidelines Manual)

Amendment dated July 7, 2022

The following Imperial County Standard Drawings are updated from the original 2008 version of the Engineering Design Guidelines Manual, and are attached herein. Brief reference notes on changes are also attached.

1	Dwg	400	Curb and Gutter	15	Dwg	426	Non-Contiguous Sidewalk
2	Dwg	401	Type "A" Barrier Curb	16	Dwg	427	Free Standing Median Curb
3	Dwg	410A-1	Standard Driveway Access	17	Dwg	430	Local Street
4	Dwg	410A-2	Confined Right of Way Driveway Access (NEW)	18	Dwg	430A	Typical Cross Section Rural Local Road
5	Dwg	410B	Commercial Driveway to County Rural Road	19	Dwg	431 A	Typical Street Cross Sections (2 lane Minor Collector/Industrial Street w/Parking)
6	Dwg	410C-1, C-2 & C-3	Residential Class 2 Base Driveway For Rural Road (NEW, 3 sheets)	20	Dwg	431B	Typical Street Cross Sections (4 Lane Minor Collector/Industrial Street w/No Parking)
7	Dwg	410D-1 & D-2	Residential PCC Driveway For Rural Road (NEW, 2 sheets)	21	Dwg	432	Typical Street Cross Sections (4 Lane Major Collector)
8	Dwg	411A	Rural Concrete Driveway for Street with Curb	22	Dwg	432A	Typical Street Cross Sections (Industrial Collector)
9	Dwg	411B	Rural Concrete Driveway for Street with No Curb	23	Dwg	434	Typical Street Cross Sections (4 Lane Minor Arterial (Median w/Single or Dual Left Turn Lane))
10	Dwg	412	Leave in Place Driveway (NEW)	24	Dwg	436	Typical Street Cross Sections (prime arterial (median w/single or dual left turn lane, 126' ROW))
11	Dwg	414 (3 sheets)	Pedestrian Ramp and Curb Return	25	Dwg	436A	Typical Street Cross Sections (Prime Arterial (Median w/Single or Dual Left Turn Lane, 136' ROW))
12	Dwg	415	Mid-Block Cross Gutter	26	Dwg	437	Typical Street Cross Sections (Expressway)
13	Dwg	420	Contiguous Sidewalk				
14	Dwg	425	Meandering Sidewalk				

By:



John A. Gay, Road Commissioner and Director of Public Works
Imperial County Public Works Department

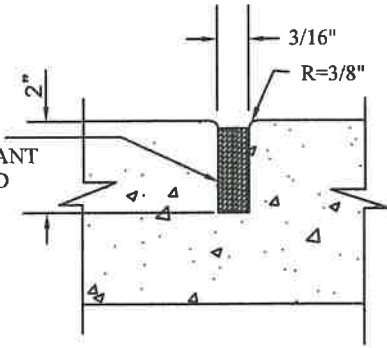
July 7, 2022

Date

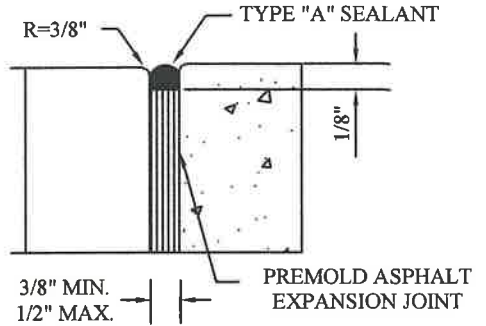
07/07/2022 Imperial County Standard Drawings (Dwgs) Revised				Notes For Changes - For Reference Information Only
1	Dwg	400	Curb and Gutter	Reflect 4,500 psi, 7 sack concrete mix, over 12" subgrade scarified & compacted to 90%.
2	Dwg	401	Type "A" Barrier Curb	Reflect 4,500 psi, 7 sack concrete mix, over 12" subgrade scarified & compacted to 90%.
3	Dwg	410A-1	Standard Driveway Access	Supersedes previous Dwg 410A; reflects 4,500 psi, 7 sack concrete mix, over 9" class 2 base compacted to 95%, over 12" subgrade scarified & compacted to 90%. Concrete reinforcement #4 rebar 18" OCBW or may use 6" welded wire fabric.
4	Dwg	410A-2	Confined Right of Way Driveway Access (NEW)	NEW; Supersedes previous Dwg 410A; reflects same as Dwg 410A-1 above, except this dwg is for locations with confined right of way whereas a sidewalk ramp to the driveway elevation, and a parkway retaining curb may be required to address onsite pad elevations much higher than street level.
5	Dwg	410B	Commercial Driveway to County Rural Road	Permits 7" thick concrete option, in lieu of asphalt concrete with concrete, base and subgrade requirements similar to other driveway applications; also permits a class 2 base option for connection to rural, unpaved roads.
6	Dwg	410C-1, C-2 & C-3	Residential Class 2 Base Driveway For Rural Road (NEW, 3 sheets)	NEW; permits a class 2 base only driveway for residential rural road applications with radius entrance. Most suitable for outlying areas outside of developments and town sites. Not suitable for town sites which are planned for future curb, gutter and sidewalk. Allows for road borrow pit drainage by pipe siphon, dip section or concrete ribbon gutter.
7	Dwg	410D-1 & D-2	Residential PCC Driveway For Rural Road (NEW, 2 sheets)	NEW; permits a concrete driveway for residential rural road applications with radius entrance. Most suitable for outlying areas outside of developments and town sites. Not suitable for town sites which are planned for future curb, gutter and sidewalk. Allows for road borrow pit drainage by pipe siphon, dip section. Concrete, base and subgrade requirements similar to other driveway applications.
8	Dwg	411A	Rural Concrete Driveway for Street with Curb	Reflect 4,500 psi, 7 sack concrete mix, over 9" class 2 base compacted to 95%, over 12" subgrade scarified & compacted to 90%; clarifies reinforcement includes #4 reinforcement bars at 18" OCBW or optional use of 6" welded wire mesh. This concrete driveway is designated, and suitable for rural residential areas where curb, gutter and sidewalk are existing, proposed or imminent in future.
9	Dwg	411B	Rural Concrete Driveway for Street with No Curb	Reflect 4,500 psi, 7 sack concrete mix, over 9" class 2 base compacted to 95%, over 12" subgrade scarified & compacted to 90%; clarifies reinforcement includes #4 reinforcement bars at 18" OCBW or optional use of 6" welded wire mesh. This concrete driveway is designated, and suitable for rural residential areas where no curb & gutter exists, proposed or likely in the near future. It is most suitable for areas where residential development is planned, or in town sites where these improvements may be planned for in future.
10	Dwg	412	Leave in Place Driveway (NEW)	NEW; Reflects applications where an existing driveway may be permitted to leave in place under certain circumstances.
11	Dwg	414 (3 sheets)	Pedestrian Ramp and Curb Return	Reflects that details shall conform to latest version of Caltrans Standard Plans, due to the constant changes of ADA.

07/07/2022 Imperial County Standard Drawings (Dwgs) Revised				Notes For Changes - For Reference Information Only
12	Dwg	415	Mid-Block Cross Gutter	Reflects 4,500 psi, 7 sack concrete mix, over 9" class 2 base compacted to 95%, over 12" subgrade scarified & compacted to 90%. Concrete reinforcement #4 rebar 18" OCBW or may use 6" welded wire mesh.
13	Dwg	420	Contiguous Sidewalk	Reflects 4,500 psi, 7 sack concrete mix, over 12" subgrade scarified & compacted to 90%.
14	Dwg	425	Meandering Sidewalk	Reflects 4,500 psi, 7 sack concrete mix, over 12" subgrade scarified & compacted to 90%. Confirms 5.5' width for locations away from back of curb.
15	Dwg	426	Non-Contiguous Sidewalk	Reflects 4,500 psi, 7 sack concrete mix, over 12" subgrade scarified & compacted to 90%. This is not same as Dwg 425, Meandering Sidewalk. This is for non-contiguous sidewalk parallel to the curb and street.
16	Dwg	427	Free Standing Median Curb	Reflect 4,500 psi, 7 sack concrete mix, over 12" subgrade scarified & compacted to 90%. Confirms dimensions.
17	Dwg	430	Local Street	Minor clarifications, intended for areas near future development or within town sites.
18	Dwg	430A	Typical Cross Section Rural Local Road	Minor clarifications, intended for rural areas outside areas of development and outside of town sites.
19	Dwg	431 A	Typical Street Cross Sections (2 lane Minor Collector/Industrial Street w/Parking	Minor clarifications
20	Dwg	431B	Typical Street Cross Sections (4 Lane Minor Collector/Industrial Street w/No Parking	Minor clarifications
21	Dwg	432	Typical Street Cross Sections (4 Lane Major Collector)	Minor clarifications
22	Dwg	432A	Typical Street Cross Sections (Industrial Collector)	Minor clarifications
23	Dwg	434	Typical Street Cross Sections (4 Lane Minor Arterial (Median w/Single or Dual Left Turn Lane))	Minor clarifications
24	Dwg	436	Typical Street Cross Sections (prime arterial (median w/single or dual left turn lane, 126' ROW))	Minor clarifications
25	Dwg	436A	Typical Street Cross Sections (Prime Arterial (Median w/Single or Dual Left Turn Lane, 136' ROW))	Minor clarifications
26	Dwg	437	Typical Street Cross Sections (Expressway)	Minor clarifications

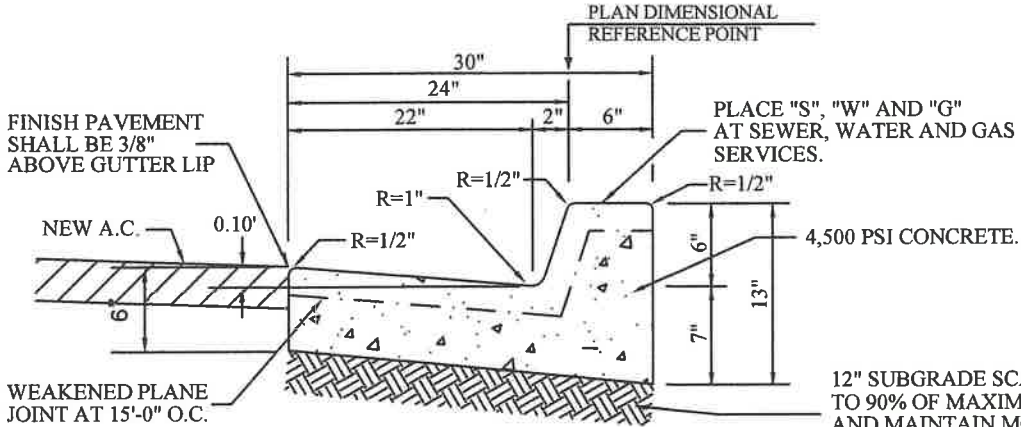
TYPE "B"
EXTEND JOINT SEALANT
ACROSS GUTTER AND
3" UPCURB FACE,
ALL JOINTS



WEAKENED PLANE JOINT
AT 15'-0" O.C. (TYP.)



EXPANSION JOINT
AT 45'-0" O.C. (TYP.)



**NOT TO
SCALE**

CURB AND GUTTER SECTION

NOTES :

- EXPANSION JOINTS TO BE INSTALLED AT ALL B.C.'S, E.C.'S CURB RETURNS AND STRUCTURES IN ADDITION TO 45' O.C.
- CURB AND GUTTER SHALL BE CLASS "1" CONCRETE WHICH CONTAINING 7 SACK MIN. OF CEMENT PER CUBIC YARD AND SHALL ATTAIN A 28-DAY COMPRESSIVE STRENGTH OF 4,500 PSI IN ACCORDANCE WITH ASTM C39/C39M-99 AND SHALL CONTAIN 1-1/2 LBS. POLYPROPYLENE FIBER PER CUBIC YARD. POLYPROPYLENE FIBER BY FIBERMESH CO., FORTA MONO, O.A.E.
- CURING COMPOUND SHALL BE SPRAYED UNIFORMLY ON EXPOSED SURFACES. HYDRO-CURE CLEAR CC-309-1W, OR APPROVED EQUAL.
- WHEN CURB AND GUTTER IS PLACED BY AN EXTRUSION MACHINE, MINOR FINISHING SHALL BE DONE TO PROVIDE AN ACCEPTABLE FINISH AND THE WEAKENED PLANE JOINT MAY BE SAWCUT.
- ALL METAL FORM STAKES MUST HAVE PROTECTIVE DEVICES SUCH AS REBAR CAPS INSTALLED AT ALL TIMES DURING USE, TO ADEQUATELY ENSURE THE PUBLIC SAFETY.
- ALL EXPOSED SURFACES TO HAVE A SMOOTH TROWEL FINISH. DRY SACK FINISH WILL NOT BE ALLOWED.
- THE CURB EDGES SHALL BE PLACED TRUE TO LINE AND GRADE. VERTICAL ELEVATIONS SHALL NOT VARY MORE THAN ±0.01' WITH A MAXIMUM VARIANCE OF 1/4" FROM DESIGN GRADE OCCURRING IN ANY GIVEN 100 FEET SECTION. THE HORIZONTAL CURB EDGES SHALL NOT VARY MORE THAN 1/4" IN ANY GIVEN 100 FOOT SECTION.



COUNTY OF IMPERIAL
DEPARTMENT OF PUBLIC WORKS
EL CENTRO, CALIFORNIA

CURB AND GUTTER

APPROVED BY:

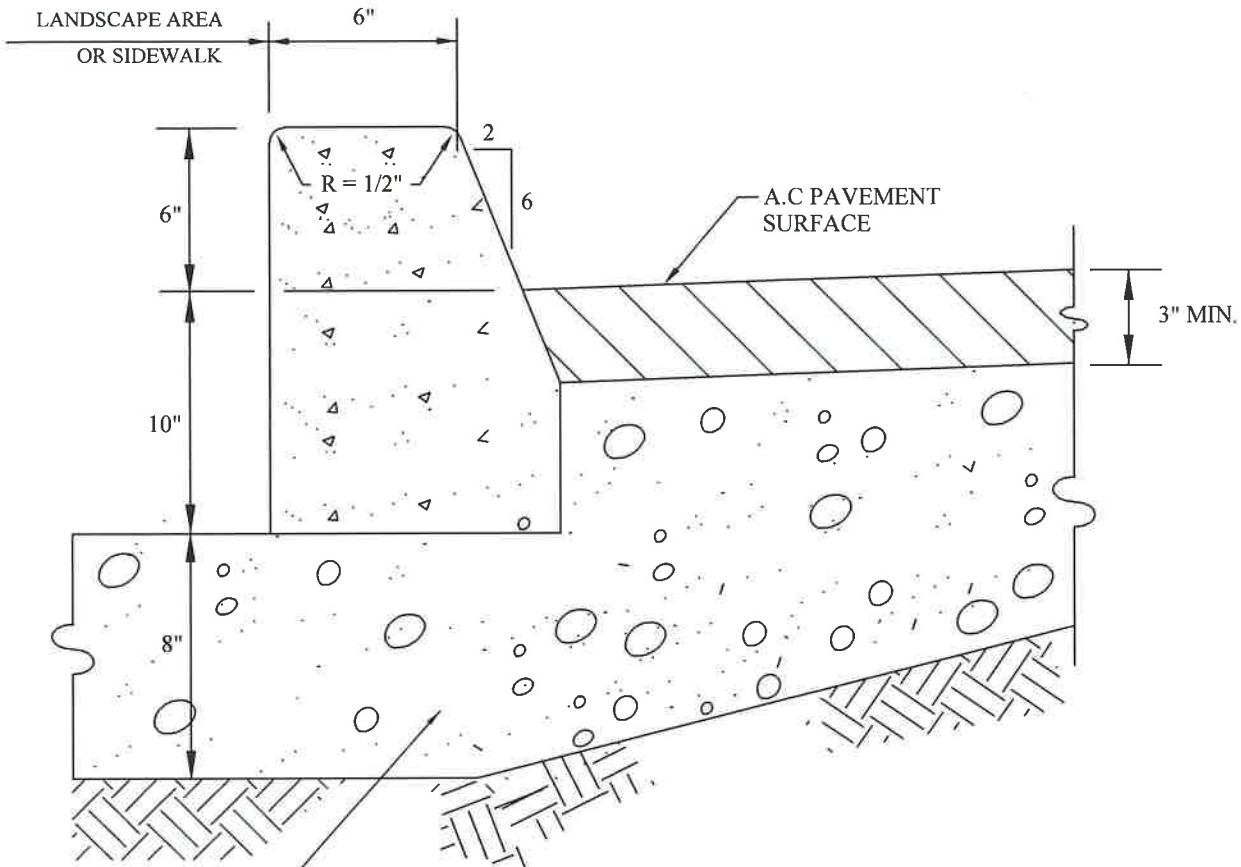
John Gay
JOHN A. GAY, P.E.
DIRECTOR OF PUBLIC WORKS

DATE: *07/7/2022*

REVISIONS

BY: APR'D: DATE:

			/ /	CHECKED: F.F.	DATE: 06/21/22
			/ /	DRAWN: G.C.V.	DWG No.: 400



CLASS II BASE
(ONLY WERE
DESIGNATED ON
PLANS)

NOTES:

1. BARRIER CURB SHALL BE CLASS "1" CONCRETE CONTAINING 7 SACKS MIN. OF CEMENT PER CUBIC YARD WHICH SHALL ATTAIN A 28-DAY COMPRESSIVE STRENGTH OF 4500 PSI IN ACCORDANCE WITH ASTM C39/C39M-99 AND SHALL CONTAIN 1-1/2 LBS. POLYPROPYLENE FIBER PER CUBIC YARD. POLYPROPYLENE FIBER BY FIBERMESH CO., FORTA MONO, O.A.E.
2. EXPANSION JOINTS TO BE INSTALLED AT ALL B.C.'S, E.C.'S CURB RETURNS AND STRUCTURES IN ADDITION TO 45' O.C.
3. CURING COMPOUND SHALL BE SPRAYED UNIFORMLY ON EXPOSED SURFACES. HYDRO-CURE CLEAR CC-309-1W, OR APPROVED EQUAL.
4. WHEN BARRIER CURB IS PLACED BY AN EXTRUSION MACHINE MINOR FINISHING SHALL BE DONE TO PROVIDE AN ACCEPTABLE FINISH AND THE WEAKENED PLANE JOINT MAY BE SAWCUT.
5. ALL METAL FORM STAKES MUST HAVE PROTECTIVE DEVICES SUCH AS REBAR CAPS INSTALLED AT ALL TIMES DURING USE TO ADEQUATELY ENSURE THE PUBLIC SAFETY.
6. ALL EXPOSED SURFACES TO HAVE A SMOOTH TROWEL FINISH. DRY SACK FINISH WILL NOT BE ALLOWED.
7. THE CURB EDGES SHALL BE PLACED TRUE TO LINE AND GRADE. VERTICAL ELEVATIONS SHALL NOT VARY MORE THAN $\pm 0.01'$ WITH A MAXIMUM VARIANCE OF 1/4" FROM DESIGN GRADE OCCURRING IN ANY GIVEN 100 FEET SECTION. THE HORIZONTAL CURB EDGES SHALL NOT VARY MORE THAN 1/4" INCH IN ANY GIVEN 100 FOOT SECTION.
8. SCARIFY AND COMPACT 12" BELOW SUBGRADE TO 90 PERCENT (MINIMUM) OF MAXIMUM DENSITY PER ASTM D-1557 AND MAINTAIN MOISTURE CONTENT OF 18+/-2%.

**NOT TO
SCALE**

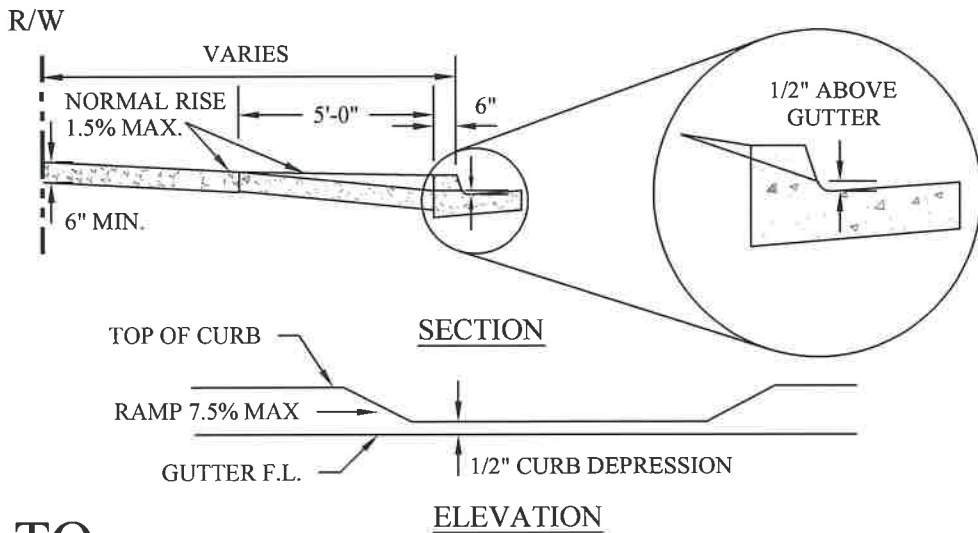
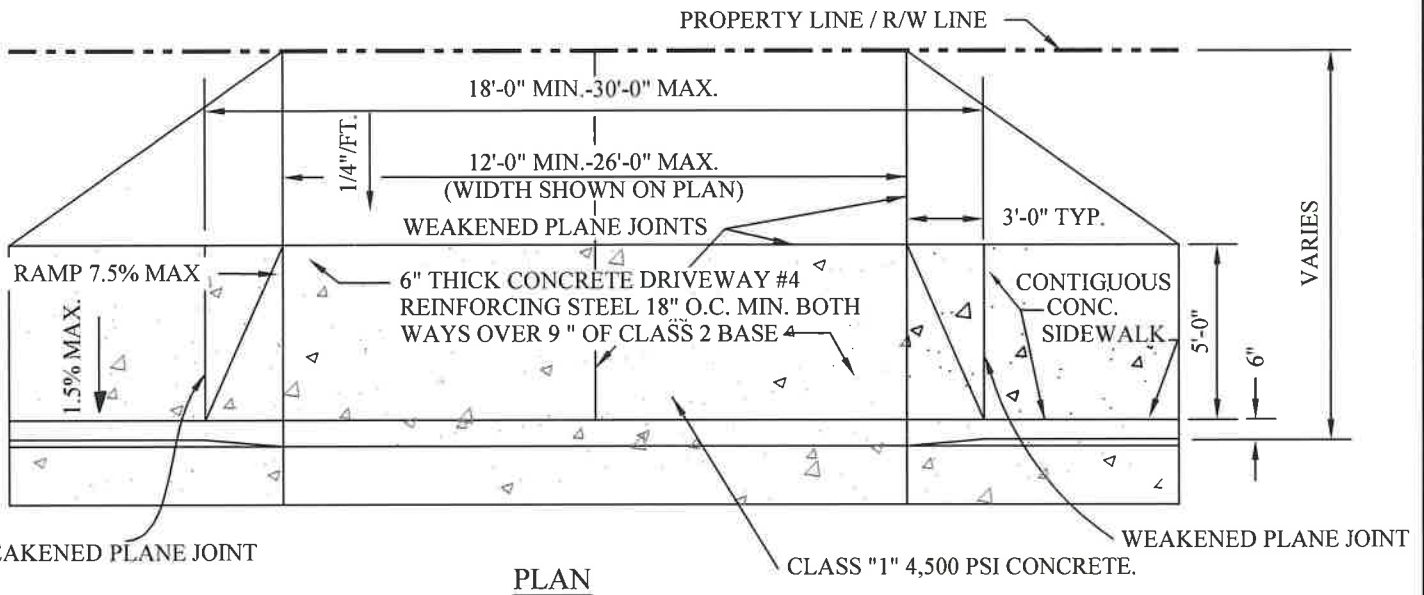


COUNTY OF IMPERIAL
DEPARTMENT OF PUBLIC WORKS
EL CENTRO, CALIFORNIA

**TYPE "A"
BARRIER CURB**

APPROVED BY: John Gay
DATE: 07/7/2022
JOHN A. GAY, P.E.
DIRECTOR OF PUBLIC WORKS

REVISIONS	BY:	APRD:	DATE:	CHECKED:	DATE:
			/ /	F.F.	06/21/22
			/ /	DRAWN:	DWG No.:
			/ /	G.C.V.	401



NOT TO SCALE

NOTES:

1. SCARIFY AND COMPACT 12" BELOW SUBGRADE TO 90 PERCENT (MINIMUM) OF MAXIMUM DENSITY PER ASTM D-1557 AND MAINTAIN MOISTURE CONTENT OF 18+/-2% FOR ALL LOCATIONS UNDERNEATH CONCRETE AND CLASS 2 BASE.
2. WEAKENED PLANE JOINTS REQUIRED ON DRIVEWAY CENTER LINE.
3. FOR JOINTS DETAILS SEE DWG 400 AND STD DWG 444.
4. WIDTH AND LOCATION AS DIRECTED BY OWNER AND APPROVED BY THE COUNTY ENGINEER OR HIS REPRESENTATIVE.
5. ENCROACHMENT PERMIT REQUIRED FROM COUNTY PUBLIC WORKS DEPT. FOR DRIVEWAY. FUTURE MAINTENANCE OF DRIVEWAY AND SIDEWALK IS THE RESPONSIBILITY OF FRONTING LANDOWNER.
6. ALL METAL FORM STAKES MUST HAVE PROTECTIVE DEVICES SUCH AS REBAR CAPS, INSTALLED AT ALL TIMES DURING USE TO ADEQUATELY ENSURE PUBLIC SAFETY.
7. CONCRETE SHALL BE CLASS #1 CONCRETE CONTAINING 7 SACKS MIN. OF CEMENT PER CUBIC YARD WHICH SHALL ATTAIN A 28 DAY COMPRESSIVE STRENGTH OF 4,500 PSI IN ACCORDANCE WITH ASTM C39/C39M-99 AND SHALL CONTAIN 1-1/2 LBS POLYPROPYLENE FIBER PER CUBIC YARD. POLYPROPYLENE FIBER BY FIBERMESH CO., FORTA MONO, O.A.E.
8. INSTALL 9" OF CLASS 2 BASE COMPACTED TO 95 PERCENT MAXIMUM DENSITY PER ASTM D-1557. ALTERNATIVELY, 6/6-6"x6" WELDED WIRE MESH MAY BE USED IN LIEU OF REINFORCING STEEL BAR.



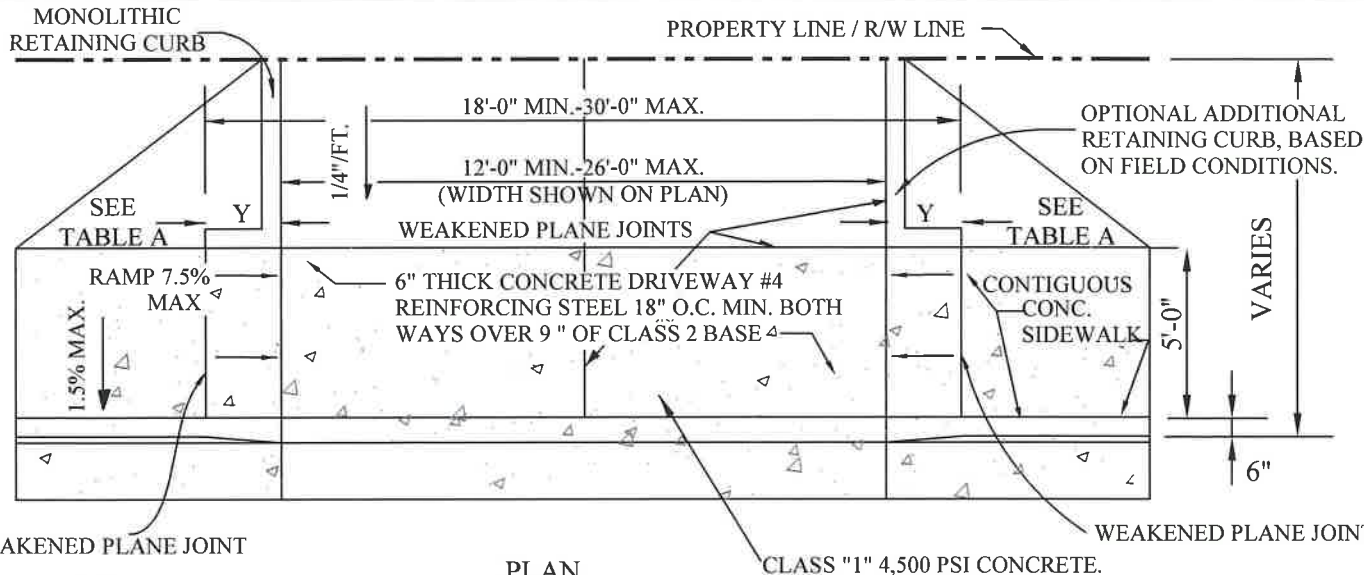
COUNTY OF IMPERIAL
DEPARTMENT OF PUBLIC WORKS
EL CENTRO, CALIFORNIA

STANDARD DRIVEWAY ACCESS

APPROVED BY:
John Gay
JOHN A. GAY, P.E.
DIRECTOR OF PUBLIC WORKS

DATE: *7/7/2022*

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			/ /	F.F.	06/21/22
			/ /	DRAWN:	DWG No.:
			/ /	G.C.V.	410A-1

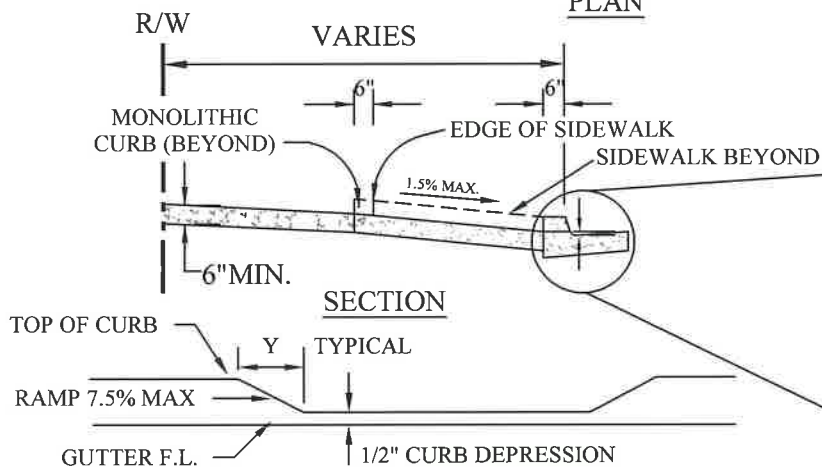


WEAKENED PLANE JOINT

WEAKENED PLANE JOINT

PLAN

CLASS "1" 4,500 PSI CONCRETE.



SECTION

TYPICAL

ELEVATION

TABLE A	
X CURB HEIGHT	Y RAMP LENGTH
1"	0'-6"
2"	1'-6"
3"	2'-6"
4"	3'-6"
5"	4'-6"
6"	5'-6"
7"	6'-6"
8"	7'-6"

NOT TO SCALE

NOTES:

- THIS DETAIL FOR CONFINED RIGHT OF WAY WHERE PAD ELEVATIONS IS MUCH HIGHER THAN STREET LEVEL GRADES REQUIRING SIDEWALK RAMP AND RETAINING CURBS AT DRIVEWAY.
- SCARIFY AND COMPACT 12" BELOW SUBGRADE TO 90 PERCENT (MINIMUM) OF MAXIMUM DENSITY PER ASTM D-1557 AND MAINTAIN MOISTURE CONTENT OF 18+/-2% FOR ALL LOCATIONS UNDERNEATH CONCRETE AND CLASS 2 BASE.
- WEAKENED PLANE JOINTS REQUIRED ON DRIVEWAY CENTER LINE.
- FOR JOINTS DETAILS SEE DETAIL 400 AND DETAIL 444.
- WIDTH AND LOCATION AS DIRECTED BY OWNER AND APPROVED BY THE COUNTY ENGINEER OR HIS REPRESENTATIVE.
- ENCROACHMENT PERMIT REQUIRED FROM COUNTY PUBLIC WORKS DEPT FOR DRIVEWAY. FUTURE MAINTENANCE OF DRIVEWAY AND SIDEWALK IS THE RESPONSIBILITY OF FRONTING LANDOWNER.
- ALL METAL FORM STAKES MUST HAVE PROTECTIVE DEVICES SUCH AS REBAR CAPS, INSTALLED AT ALL TIMES DURING USE TO ADEQUATELY ENSURE PUBLIC SAFETY.
- CONCRETE SHALL BE CLASS "1" CONCRETE CONTAINING 7 SACKS MIN. OF CEMENT PER CUBIC YARD WHICH SHALL ATTAIN A 28 DAY COMPRESSIVE STRENGTH OF 4,500 PSI IN ACCORDANCE WITH ASTM C39/C39M-99 AND SHALL CONTAIN 1-1/2 LBS POLYPROPYLENE FIBER PER CUBIC YARD. POLYPROPYLENE FIBER BY FIBERMESH CO., FORTA MONO, O.A.E.
- INSTALL 9" OF CLASS 2 BASE COMPACTED TO 95 PERCENT MAXIMUM DENSITY PER ASTM D-1557. ALTERNATIVELY, 6/6-6"x6" WELDED WIRE MESH MAY BE USED IN LIEU OF REINFORCING STEEL BAR.



COUNTY OF IMPERIAL

DEPARTMENT OF PUBLIC WORKS

EL CENTRO, CALIFORNIA

CONFINED RIGHT OF WAY DRIVEWAY ACCESS

APPROVED BY:

John Gay
JOHN A. GAY, P.E.

DIRECTOR OF PUBLIC WORKS

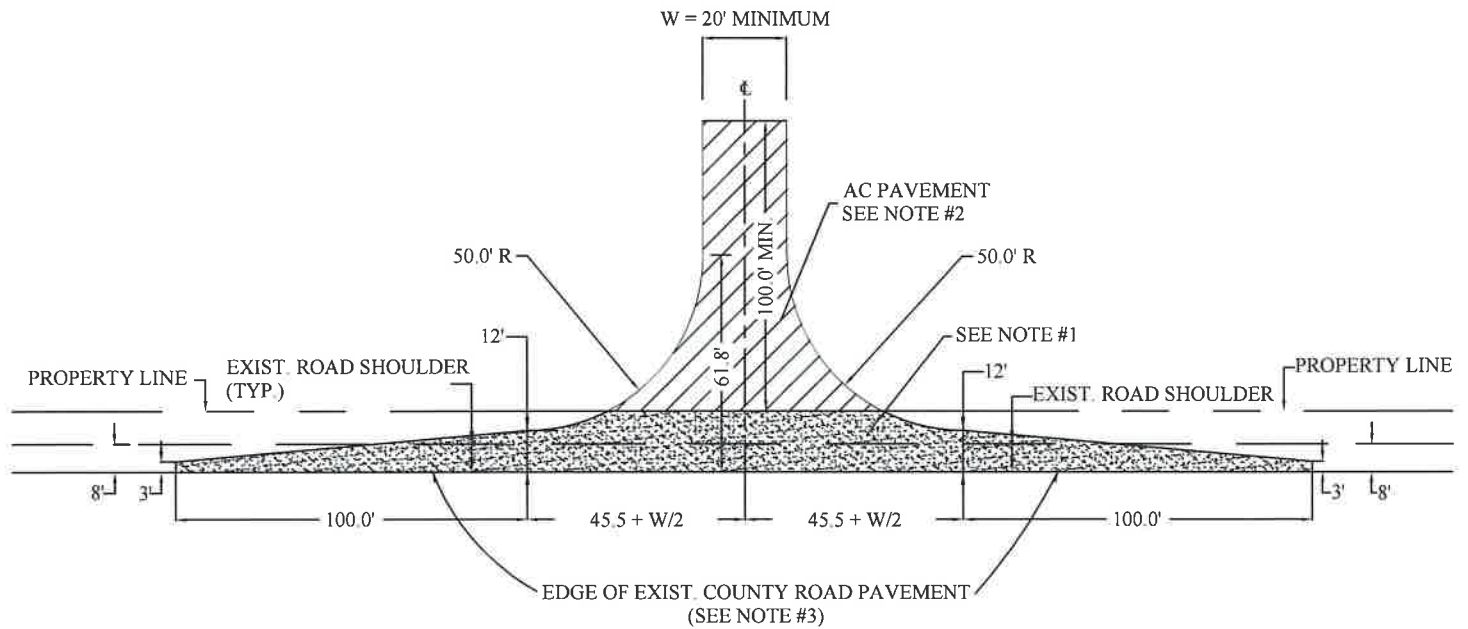
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REVISIONS

BY: APR'D: DATE:

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CHECKED: F.F.	DATE: 06/21/22
DRAWN: G.C.V.	DWG No.: 410A-2



NOT TO
SCALE

NOTES :

1. DRIVEWAY IN COUNTY ROAD RIGHT OF WAY SHALL BE 4" ASPHALT CONCRETE OVER 12" OF CLASS 2 AGGREGATE BASE MINIMUM OVER 12" SCARIFY AND COMPACTED SUBGRADE. SEE DRAWING 440.
2. DRIVEWAY ONSITE SHALL BE PAVED A MINIMUM OF 100 FEET INSIDE THE PROPERTY LINE, THE 4" ASPHALT CONCRETE OVER 12" CLASS 2 AGGREGATE BASE SECTION IS RECOMMENDED. HOWEVER A MINIMUM ASPHALT CONCRETE THICKNESS IS 2".
3. SAWCUT AND REMOVE EXISTING PAVEMENT 12" MINIMUM.
4. ROAD BORROW PIT DRAINAGE SHALL BE ACCOMMODATED VIA 12" MIN. PIPE SIPHON, DIP SECTION OR CONCRETE GUTTER AS DIRECTED BY COUNTY PUBLIC WORKS DIRECTOR.
5. THIS DETAIL IS A MINIMUM. PROJECT CONDITIONS OF APPROVAL OR ENCROACHMENT PERMIT MAY REQUIRE MORE SUBSTANTIAL IMPROVEMENTS SUCH AS TURN LANES, CURB, GUTTER AND SIDEWALK.
6. FOR UNPAVED COUNTY ROAD, THE ASPHALT CONCRETE MAY BE OMITTED THE 100' TAPER FOR BASE DRIVEWAY CAN BE SHORTENED TO 24' EACH SIDE.
7. CONCRETE MAY BE USED IN LIEU OF ASPHALT CONCRETE. IF USED, CONCRETE SHALL BE CLASS "I" CONCRETE CONTAINING 7 SACKS MIN. OF CEMENT PER CUBIC YARD WHICH SHALL ATTAIN A 28 DAY COMPRESSIVE STRENGTH OF 4,500 PSI IN ACCORDANCE WITH ASTM C39/C39M-99 AND SHALL CONTAIN 1-1/2 LBS POLYPROPYLENE FIBER PER CUBIC YARD. POLYPROPYLENE FIBER SHALL BE 8Y FIBERMESH CO, FOLTAMONO OR APPROVED EQUIVALENT.



COUNTY OF IMPERIAL
DEPARTMENT OF PUBLIC WORKS
EL CENTRO, CALIFORNIA

**COMMERCIAL DRIVEWAY TO
RURAL ROAD**

APPROVED BY:

John Gay
JOHN A. GAY, P.E.

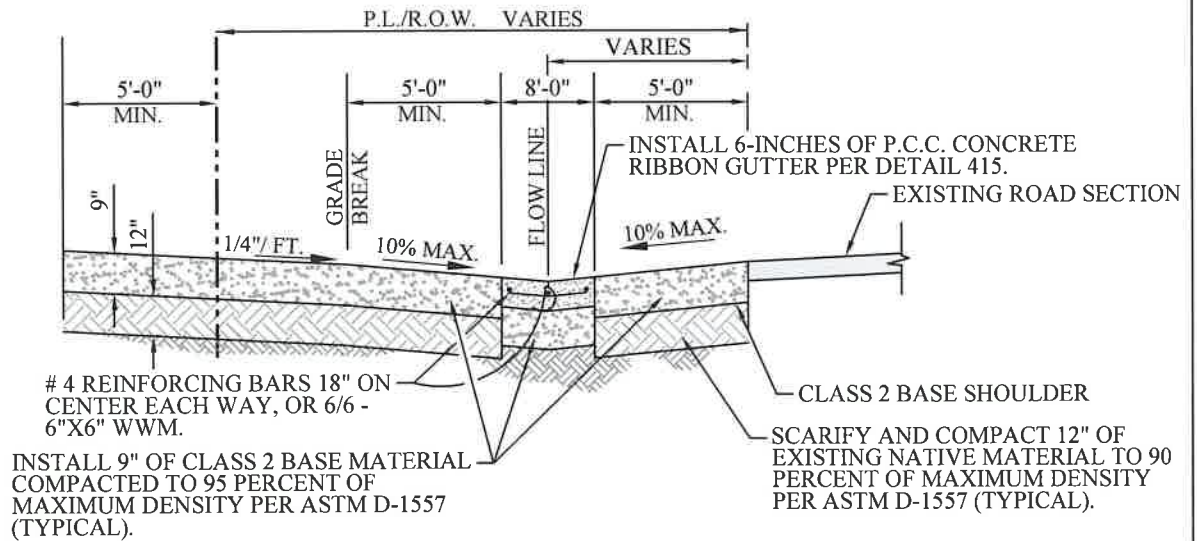
DIRECTOR OF PUBLIC WORKS

DATE: 7/7/2022

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BY: APR'D: DATE:

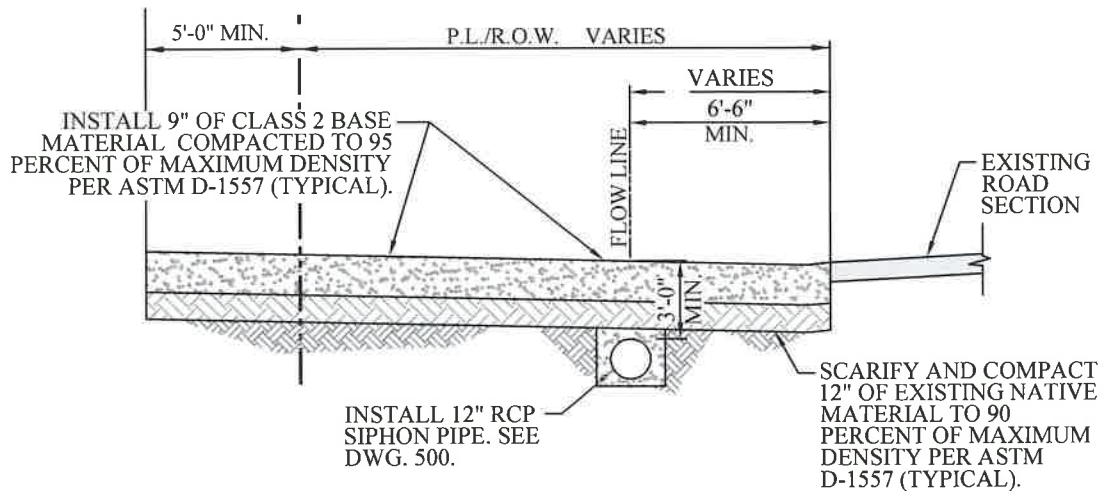
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SECTION B-B
WITH CONCRETE RIBBON GUTTER OPTION

NOTES :

1. CONCRETE SHALL CONTAIN 7 SACKS OF CEMENT PER CUBIC YARD AND ATTAIN A COMPRESSIVE STRENGTH OF 4,500 PSI AFTER 28 DAYS CURING IN ACCORDANCE WITH ASTM C39/C39M-99 AND SHALL CONTAIN 1-1/2 LBS. POLYPROPYLENE FIBER PER CUBIC YARD. POLYPROPYLENE FIBER BY FIBERMESH CO., FORTA MONO, O.A.E.
2. WEAKENED PLANE JOINTS SHALL BE CONSTRUCTED AT 10-FOOT INTERVALS, EXCEPT THAT THE INTERVAL SHALL BE VARIED TO ALLOW MATCHING OF JOINTS IN ADJACENT EXISTING IMPROVEMENTS. SEE DWG. 444.
3. CURING COMPOUND SHALL BE CURE-TREAT (CONCRETE CONDITIONER AND CURING AID) AS MANUFACTURED BY W.R. MEADOWS INC OR APPROVED EQUAL. COMPOUND SHALL BE APPLIED IN ACCORDANCE WITH MANUFACTURERS RECOMENDATION.
4. ALL METAL FORM STAKES MUST HAVE PROTECTIVE DEVICES SUCH AS REBAR CAPS INSTALLED AT ALL TIMES DURING USE, TO ADEQUATELY ENSURE THE PUBLIC SAFETY.
5. ALL EXPOSED SURFACES TO HAVE A SMOOTH TROWEL FINISH. DRY SACK FINISH WILL NOT BE ALLOWED.



SECTION B-B
WITH 12" SIPHON PIPE OPTION

NOT TO SCALE



COUNTY OF IMPERIAL

DEPARTMENT OF PUBLIC WORKS
EL CENTRO, CALIFORNIA

RESIDENTIAL CLASS 2 BASE DRIVEWAY FOR RURAL ROAD

APPROVED BY:

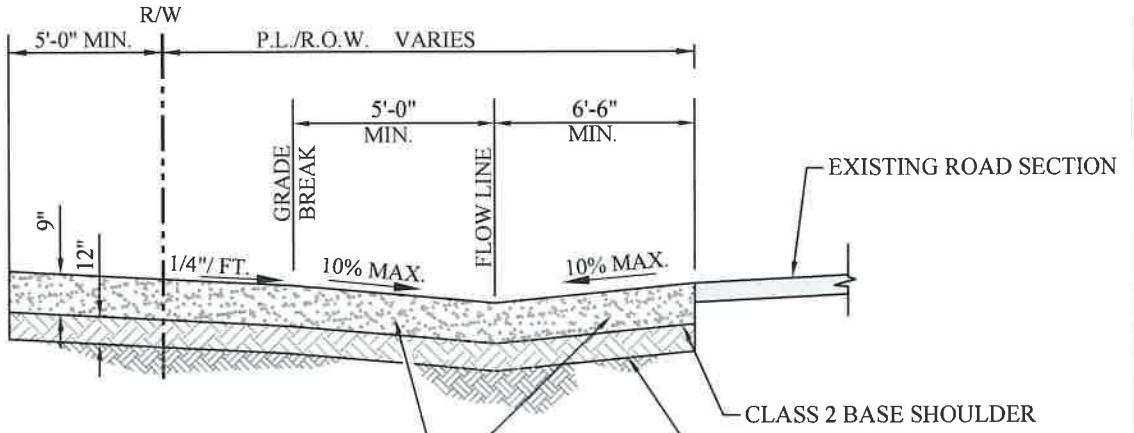
John Gay
JOHN A. GAY, P.E.
DIRECTOR OF PUBLIC WORKS

DATE: 7/7/2022

REVISIONS

BY: APR'D: DATE:

			/ /	CHECKED: F.F.	DATE: 06/21/22
			/ /	DRAWN: G.C.V.	DWG No.: 410C-2



INSTALL 9" OF CLASS 2 BASE MATERIAL COMPACTED TO 95 PERCENT OF MAXIMUM DENSITY PER ASTM D-1557 (TYPICAL).

SCARIFY AND COMPACT 12" OF EXISTING NATIVE MATERIAL TO 90 PERCENT OF MAXIMUM DENSITY PER ASTM D-1557 (TYPICAL).

SECTION B-B
WITH DIP SECTION OPTION

NOTE:

1. THIS DIP SECTION IS FOR A PROPOSED CLASS 2 AGGREGATE BASE ONLY DRIVEWAY.

NOT TO SCALE



COUNTY OF IMPERIAL

DEPARTMENT OF PUBLIC WORKS
EL CENTRO, CALIFORNIA

RESIDENTIAL CLASS 2 BASE DRIVEWAY FOR RURAL ROAD

APPROVED BY:

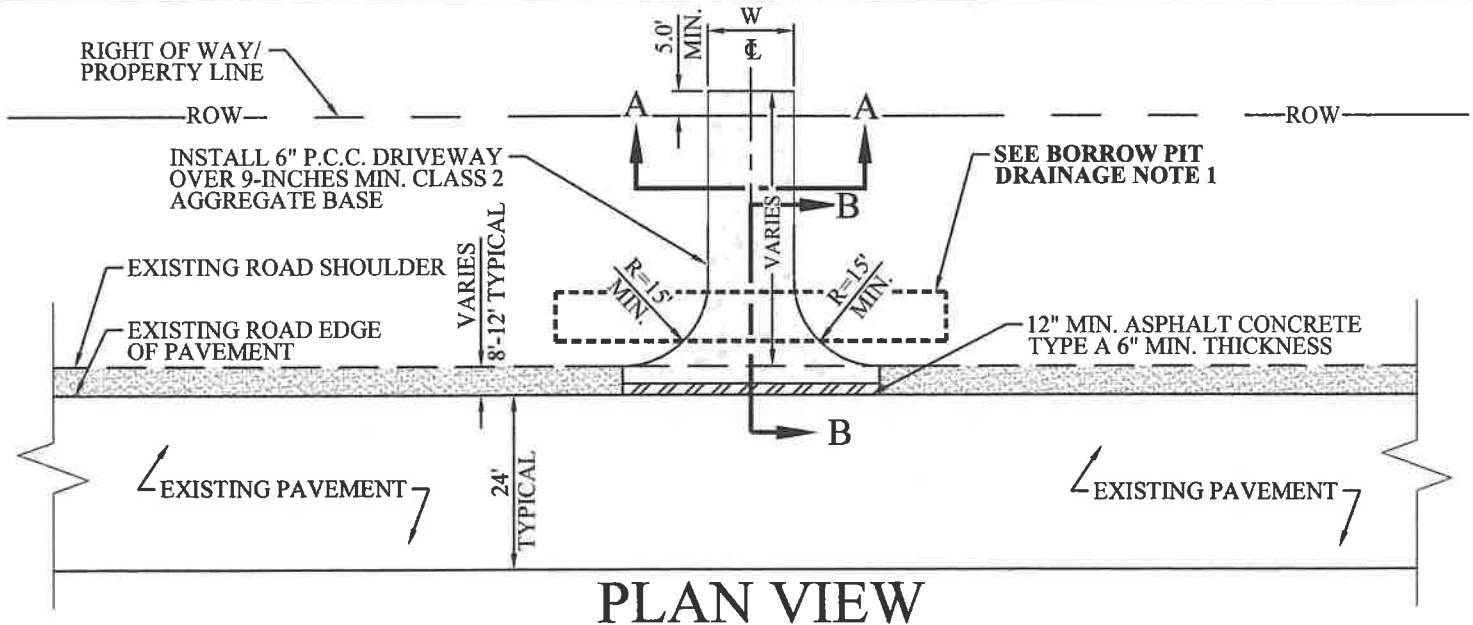
John Gay
JOHN A. GAY, P.E.
DIRECTOR OF PUBLIC WORKS

DATE: *7/7, 2022*

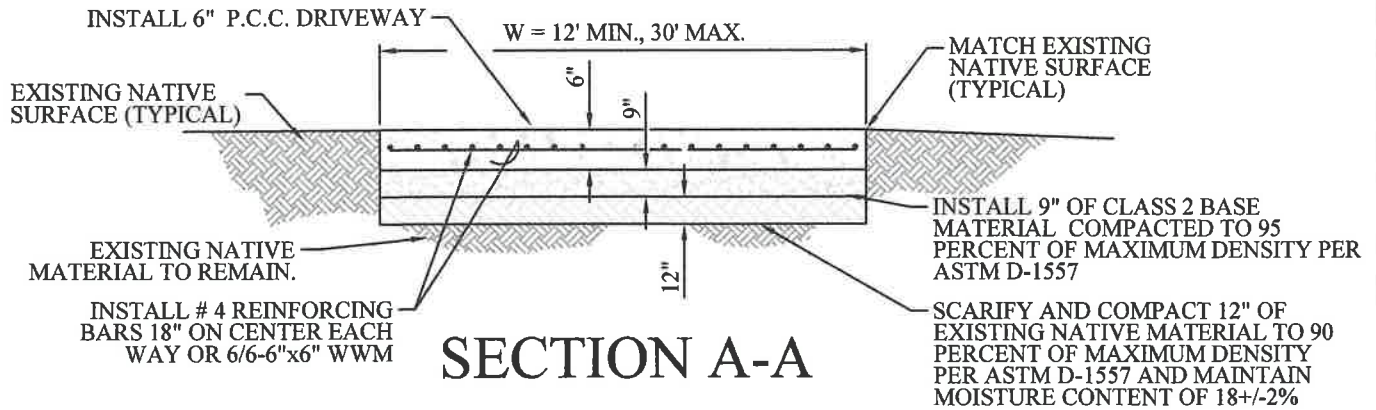
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BY: APR'D: DATE:

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			/ /	DRAWN: G.C.V.	DWG No.: 410C-3



PLAN VIEW



SECTION A-A

NOTES :

1. ROAD BORROW PIT DRAINAGE SHALL BE ACCOMMODATED VIA 12" MIN. PIPE SIPHON OR DIP SECTION AS REQUESTED BY OWNER, AUTHORIZED AND PERMITTED BY DIRECTOR OF PUBLIC WORKS. SEE DWG. 410D-2.
2. THIS DETAIL IS A MINIMUM. PROJECT CONDITIONS OF APPROVAL OR ENCROACHMENT PERMIT MAY REQUIRE MORE SUBSTANTIAL IMPROVEMENTS AS DETERMINED AND PERMITTED BY DIRECTOR OF PUBLIC WORKS.
3. CONCRETE SHALL CONTAIN 7 SACKS MIN. OF CEMENT PER CUBIC YARD AND ATTAIN A COMPRESSIVE STRENGTH OF 4,500 PSI AFTER 28 DAYS CURING IN ACCORDANCE WITH ASTM C39/C39M-99 AND SHALL CONTAIN 1-1/2 LBS. POLYPROPYLENE FIBER PER CUBIC YARD. POLYPROPYLENE FIBER BY FIBERMESH CO., FORTA MONO, O.A.E.
4. WEAKENED PLANE JOINTS SHALL BE CONSTRUCTED AT 10-FOOT INTERVALS, EXCEPT THAT THE INTERVAL SHALL BE VARIED TO ALLOW MATCHING OF JOINTS IN ADJACENT EXISTING IMPROVEMENTS. SEE DWG. 444.
5. CURING COMPOUND SHALL BE CURE-TREAT (CONCRETE CONDITIONER AND CURING AID) AS MANUFACTURED BY W.R. MEADOWS INC OR APPROVED EQUAL. COMPOUND SHALL BE APPLIED IN ACCORDANCE WITH MANUFACTURERS RECOMENDATION.
6. ALL METAL FORM STAKES MUST HAVE PROTECTIVE DEVICES SUCH AS REBAR CAPS INSTALLED AT ALL TIMES DURING USE, TO ADEQUATELY ENSURE THE PUBLIC SAFETY.
7. ALL EXPOSED SURFACES TO HAVE A SMOOTH TROWEL FINISH. DRY SACK FINISH WILL NOT BE ALLOWED.

NOT TO SCALE



COUNTY OF IMPERIAL
DEPARTMENT OF PUBLIC WORKS
EL CENTRO, CALIFORNIA

**RESIDENTIAL P.C.C
DRIVEWAY FOR RURAL ROAD**

APPROVED BY:

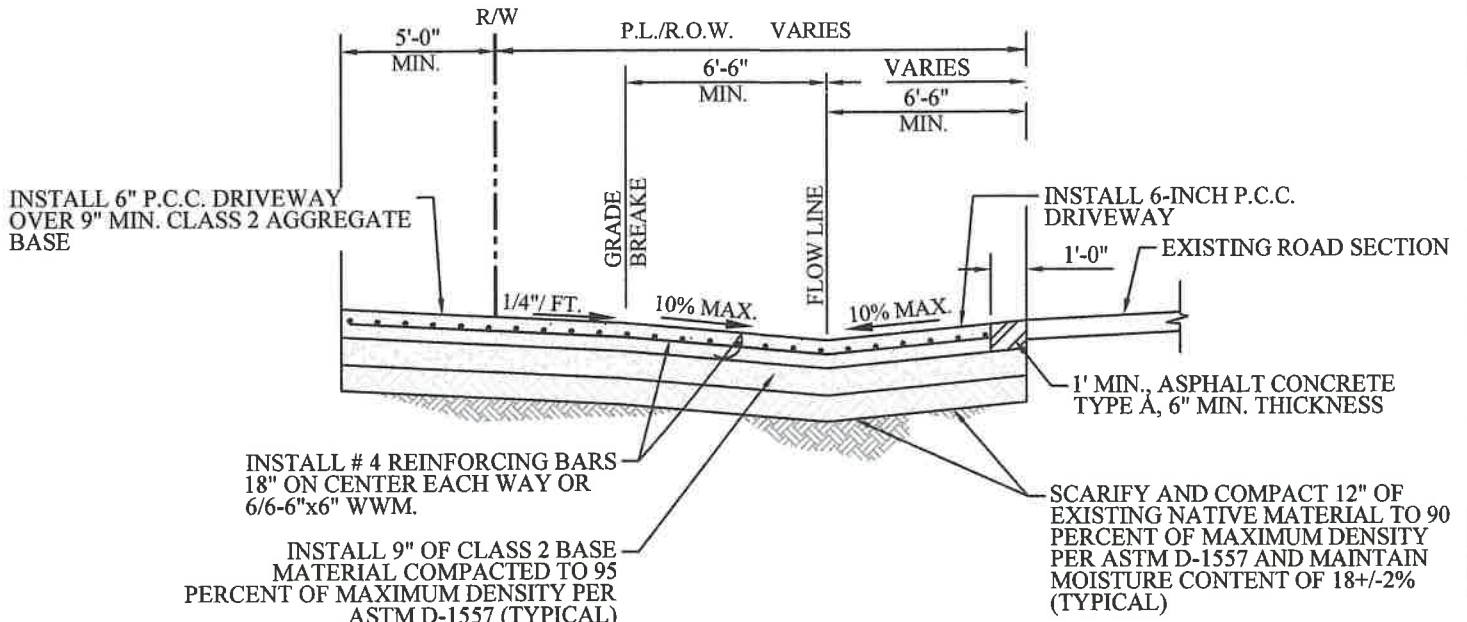
John Gay
JOHN A. GAY, P.E.
DIRECTOR OF PUBLIC WORKS

DATE: 7/7/2022

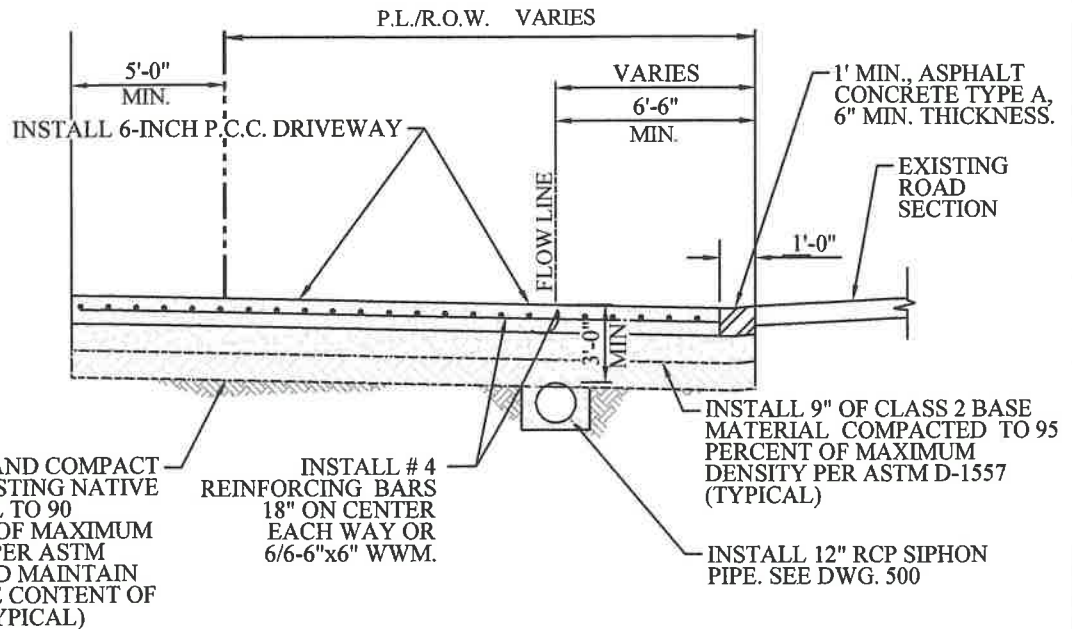
REVISIONS

BY: APR'D: DATE:

			/ /	CHECKED: F.F.	DATE: 06/21/22
			/ /	DRAWN: G.C.V.	DWG No.: 410D-1



SECTION B-B
WITH DIP SECTION OPTION



SECTION B-B
WITH 12-INCH SIPHON PIPE OPTION

NOT TO SCALE



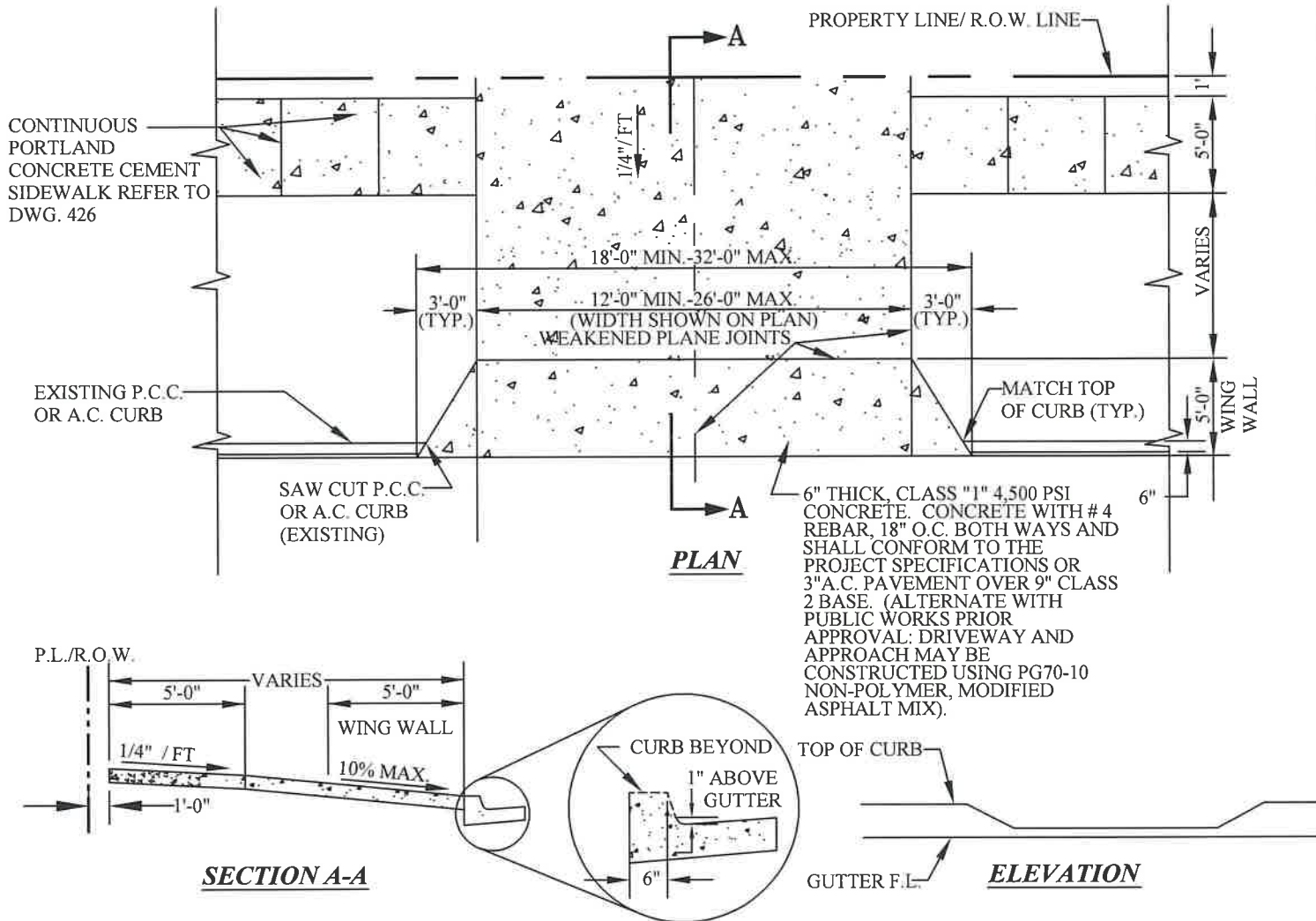
COUNTY OF IMPERIAL
DEPARTMENT OF PUBLIC WORKS
EL CENTRO, CALIFORNIA

**RESIDENTIAL P.C.C.
DRIVEWAY FOR RURAL ROAD**

APPROVED BY:
John Gay
JOHN A. GAY, P.E.
DIRECTOR OF PUBLIC WORKS

DATE: *7/7/2022*

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			/ /	F.F.	06/21/22
			/ /	G.C.V.	410D-2



6" THICK, CLASS "1" 4,500 PSI CONCRETE. CONCRETE WITH # 4 REBAR, 18" O.C. BOTH WAYS AND SHALL CONFORM TO THE PROJECT SPECIFICATIONS OR 3" A.C. PAVEMENT OVER 9" CLASS 2 BASE. (ALTERNATE WITH PUBLIC WORKS PRIOR APPROVAL: DRIVEWAY AND APPROACH MAY BE CONSTRUCTED USING PG70-10 NON-POLYMER, MODIFIED ASPHALT MIX).

NOTES:

1. SCARIFY AND COMPACT 12" BELOW SUBGRADE TO 90 PERCENT (MINIMUM) OF MAXIMUM DENSITY PER ASTM D-1557 AND MAINTAIN MOISTURE CONTENT OF 18+/-2% FOR ALL LOCATIONS UNDERNEATH CONCRETE AND CLASS 2 BASE.
2. WEAKENED PLANE JOINTS REQUIRED ON DRIVEWAY CENTER LINE.
3. FOR JOINTS DETAILS SEE DWG. 400.
4. WIDTH AND LOCATION AS DIRECTED BY OWNER AND APPROVED BY THE COUNTY ENGINEER OR HIS REPRESENTATIVE.
5. ENCROACHMENT PERMIT REQUIRED FROM COUNTY PUBLIC WORKS DEPT. FOR DRIVEWAY. FOR FUTURE MAINTENANCE OF DRIVEWAY AND SIDEWALK IS THE RESPONSIBILITY OF FRONTING LANDOWNERS.
6. CONCRETE SHALL BE CLASS "1" CONCRETE CONTAINING 7 SACKS MIN. OF CEMENT PER CUBIC YARD WHICH SHALL ATTAIN A 28 DAY COMPRESSIVE STRENGTH OF 4,500 PSI IN ACCORDANCE WITH ASTM C39/C39M-99 AND SHALL CONTAIN 1-1/2 LBS POLYPROPYLENE FIBER PER CUBIC YARD. POLYPROPYLENE FIBER BY FIBERMESH CO., FORTA MONO, O.A.E.
7. ALL METAL FORM STAKES MUST HAVE PROTECTIVE DEVICES SUCH AS REBAR CAPS INSTALLED AT ALL TIMES DURING USE TO ADEQUATELY ENSURE THE PUBLIC SAFETY.
8. INSTALL 9" OF CLASS 2 BASE COMPACTED TO 95 PERCENT MAXIMUM DENSITY PER ASTM D-1557.
9. ALTERNATIVELY, 6/6-6"x6" WIRE WELDED MESH MAY BE USED IN LIEU OF REINFORCING STEEL BAR.

NOT TO SCALE



COUNTY OF IMPERIAL
 DEPARTMENT OF PUBLIC WORKS
 EL CENTRO, CALIFORNIA

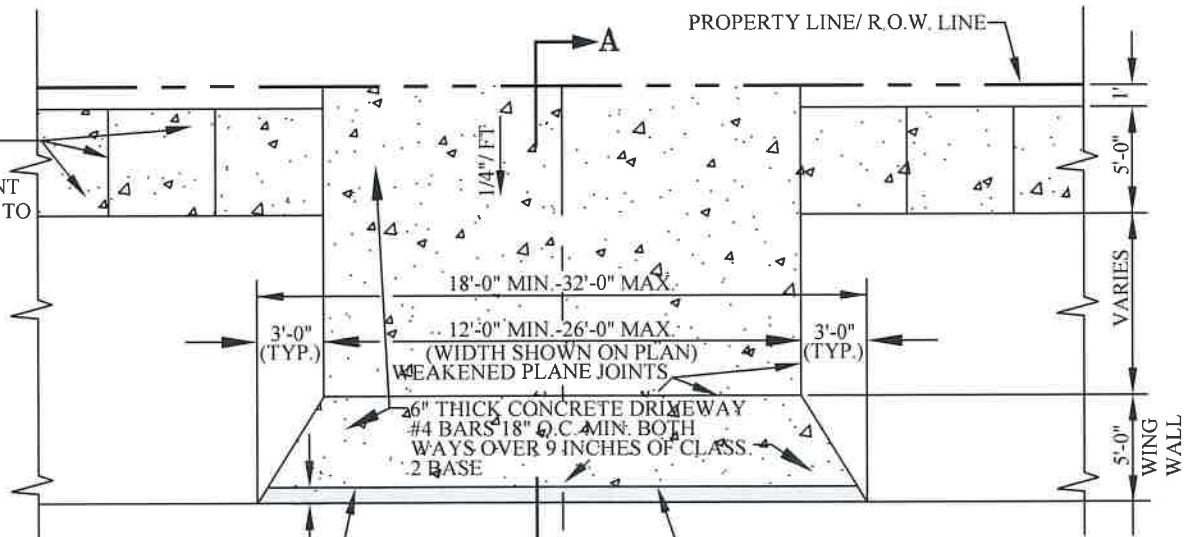
RURAL CONCRETE DRIVEWAY FOR STREET WITH CURB

APPROVED BY:
John Gay
 JOHN A. GAY, P.E.
 DIRECTOR OF PUBLIC WORKS

DATE: *7/7/2022*

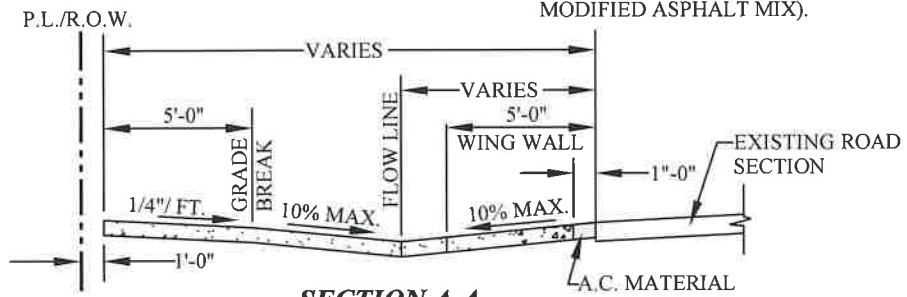
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			/ /	F.F.	06/21/22
			/ /	DRAWN:	DWG No.:
			/ /	G.C.V.	411A

CONTINUOUS PORTLAND CONCRETE CEMENT SIDEWALK REFER TO DWG. 426



PLAN

CLASS "1" 4,500 PSI CONCRETE. CONCRETE SHALL CONFORM TO THE PROJECT SPECIFICATIONS OR 3" A.C. OVER 9" BASE.
(ALTERNATE WITH PUBLIC WORKS PRIOR APPROVAL: DRIVEWAY AND APPROACH MAY BE CONSTRUCTED USING PG70-10 NON-POLYMER, MODIFIED ASPHALT MIX).



SECTION A-A

NOTES :

1. SCARIFY AND COMPACT 12" BELOW SUBGRADE TO 90 PERCENT (MINIMUM) OF MAXIMUM DENSITY PER ASTM D-1557 AND MAINTAIN MOISTURE CONTENT OF 18+/-2% FOR ALL LOCATIONS UNDERNEATH CONCRETE AND CLASS 2 BASE.
2. WEAKENED PLANE JOINTS REQUIRED ON DRIVEWAY CENTER LINE.
3. FOR JOINTS DETAILS SEE DWG. 400.
4. WIDTH AND LOCATION AS DIRECTED BY OWNER AND APPROVED BY THE COUNTY ENGINEER OR HIS REPRESENTATIVE.
5. ENCROACHMENT PERMIT REQUIRED FROM COUNTY PUBLIC WORKS DEPT. FOR DRIVEWAY. FUTURE MAINTENANCE OF DRIVEWAY AND SIDEWALK IS THE RESPONSIBILITY OF FRONTING LANDOWNERS.
6. CONCRETE SHALL BE CLASS "1" CONCRETE CONTAINING 7 SACKS MIN. OF CEMENT PER CUBIC YARD WHICH SHALL ATTAIN A 28 DAY COMPRESSIVE STRENGTH OF 4,500 PSI IN ACCORDANCE WITH ASTM C39/C39M-99 AND SHALL CONTAIN 1-1/2 LBS POLYPROPYLENE FIBER PER CUBIC YARD. POLYPROPYLENE FIBER BY FIBERMESH CO., FORTA MONO, O.A.E.
7. ALL METAL FORM STAKES MUST HAVE PROTECTIVE DEVICES SUCH AS REBAR CAPS INSTALLED AT ALL TIMES DURING USE, TO ADEQUATELY ENSURE THE PUBLIC SAFETY.
8. INSTALL 9" OF CLASS 2 BASE COMPACTED TO 95 PERCENT MAXIMUM DENSITY PER ASTM D-1557.
9. ALTERNATIVELY , 6/6-6"x6" WIRE WELDED MESH MAY BE USED IN LIEU OF REINFORCED STEEL BAR.

NOT TO SCALE



COUNTY OF IMPERIAL
DEPARTMENT OF PUBLIC WORKS
EL CENTRO, CALIFORNIA

RURAL CONCRETE DRIVEWAY FOR STREET WITH NO CURB

APPROVED BY:
John Gay
JOHN A. GAY, P.E.
DIRECTOR OF PUBLIC WORKS

DATE: *7/7/2022*

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			/ /	DRAWN:	DWG No.:
			/ /	G.C.V.	411B

SPECIAL CIRCUMSTANCES MAY PERMIT AN EXISTING DRIVEWAY TO REMAIN IN PLACE, AS IS, WITHOUT ADDITIONAL IMPROVEMENTS. FOLLOWING ARE BASIC GUIDELINES:

1. A LEAVE IN PLACE DRIVEWAY ACCESS IS ONLY FOR SPECIAL CIRCUMSTANCES, REQUESTED BY APPLICANT TO THE DIRECTOR OF PUBLIC WORKS, AND SUBJECT TO COUNTY ENCROACHMENT PERMIT CONDITIONS.
2. APPLICANT SHALL USE THE REQUEST FOR A MODIFICATION TO A ROAD STANDARD FORM, WHICH CAN BE FOUND WITHIN THE LATEST ENGINEERING DESIGN GUIDELINES MANUAL FOR THE PREPARATION AND CHECKING OF STREET IMPROVEMENT, DRAINAGE AND GRADING PLANS WITHIN IMPERIAL COUNTY. THE GUIDELINES ARE POSTED AT THE FOLLOWING WEBSITE ADDRESS: [HTTPS://PUBLICWORKS.IMPERIALCOUNTY.ORG/FORMS-AND-GUIDELINES/](https://publicworks.imperialcounty.org/forms-and-guidelines/)
3. APPLICANT SHALL EXPLAIN SPECIAL CIRCUMSTANCES WHY A STANDARD DRIVEWAY DRAWING IS NOT NECESSARY FOR THE SPECIFIC APPLICATION.
 - a. IDENTIFY THE ZONING OF THE LAND PRIOR TO THE DEVELOPMENT AND THE CURRENT ZONING
 - b. IDENTIFY THE USE OF THE DRIVEWAY ACCESS PRIOR TO THE DEVELOPMENT AND THE CURRENT PROPOSED USE
 - c. IDENTIFY THE EXISTING DRIVEWAY CHARACTERISTICS, HOW ROAD DRAINAGE IS ADDRESSED ACROSS DRIVEWAY, ETC.
 - d. IDENTIFY DRIVEWAY LOCATION IN REFERENCE TO THE PROPERTY BOUNDARIES, DISTANCE FROM NEARBY ROAD INTERSECTIONS AND OTHER DRIVEWAYS.
 - e. PROVIDE PROPERTY IDENTIFICATION FOR INSPECTION PURPOSES.
 - f. WHERE THE EXISTING DRIVEWAY ACCESS IS IN PLACE, HAS BEEN IN PLACE PRIOR TO THE PROJECT DEVELOPMENT
4. A LEAVE IN PLACE PERMIT IS SUBJECT TO INSPECTION AND PERMIT REVIEW
5. A LEAVE IN PLACE PERMIT MAY BE CONSIDERED IF THE NEW USE IS SIMILAR TO THE PREVIOUS, EXISTING USE OF THE DRIVEWAY AND THERE ARE NO SIGNIFICANT ADDITIONAL VEHICLE TRIPS PER DAY PROPOSED.
6. A LEAVE IN PLACE PERMIT WILL NOT BE PERMITTED IF THE USE OF THE DRIVEWAY HAS A POTENTIAL FOR HIGH RISK OF ITS USE IN RELATION TO THE EXISTING ROAD TRAFFIC VOLUME, TYPE OF USE AND/OR LOCATION.
7. A LEAVE IN PLACE DRIVEWAY MAY NOT BE AN OPTION WHERE STREET IMPROVEMENTS (CURB & GUTTER AND/OR SIDEWALK) EXIST EITHER AT THE PARCEL OR IN THE VICINITY (SALTON CITY, HEBER, WINTERHAVEN, SEELEY, NILAND). THIS IS SUBJECT TO CASE BY CASE SITUATION.
8. LEAVE IN PLACE DRIVEWAYS COULD BE A DEFAULT FOR RESIDENTIAL PROJECTS WITH UNIMPROVED ACCESS ROADS.

NOT TO SCALE



COUNTY OF IMPERIAL
DEPARTMENT OF PUBLIC WORKS
EL CENTRO, CALIFORNIA

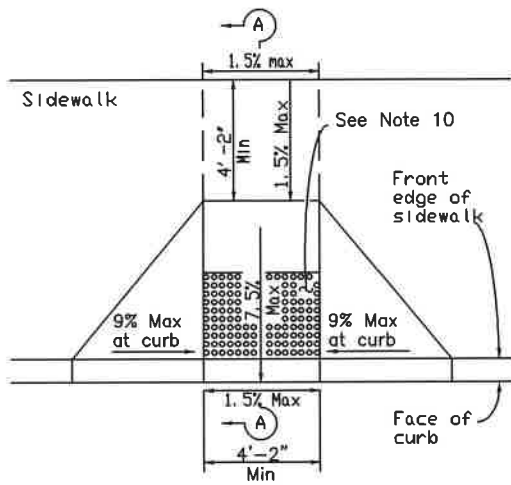
LEAVE IN PLACE DRIVEWAY

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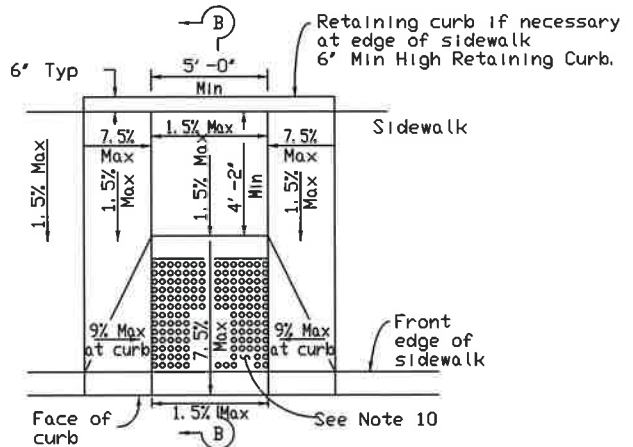
John Gay
JOHN A. GAY, P.E.
DIRECTOR OF PUBLIC WORKS

DATE: *7/7/2022*

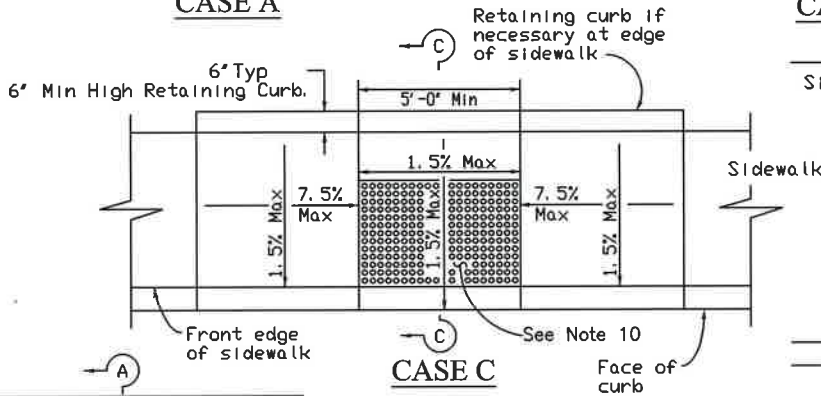
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			/ /	A.G.	DWG No.: 412



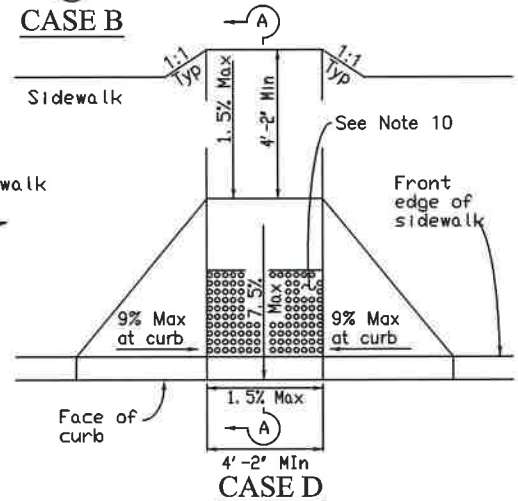
CASE A



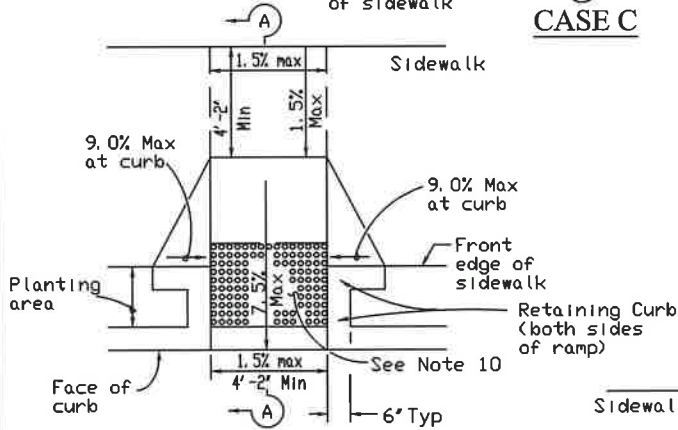
CASE B



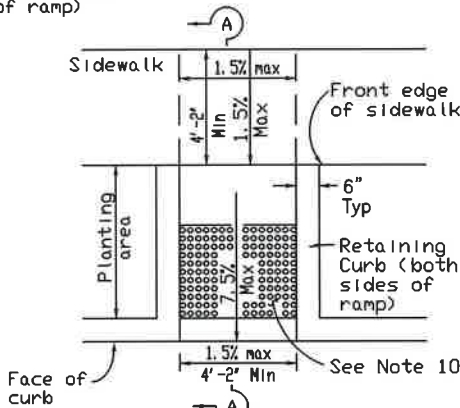
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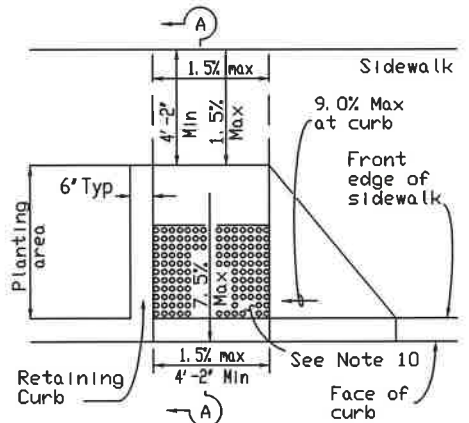
CASE D



CASE E



CASE F



CASE G
See Note 4



COUNTY OF IMPERIAL

DEPARTMENT OF PUBLIC WORKS
EL CENTRO, CALIFORNIA

PEDESTRIAN RAMP AND
CURB RETURN

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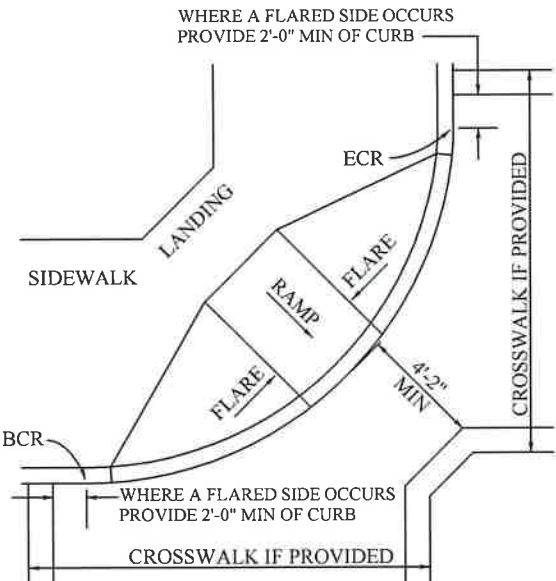
John Gay
JOHN A. GAY, P.E.
DIRECTOR OF PUBLIC WORKS

DATE: 7/7, 2022

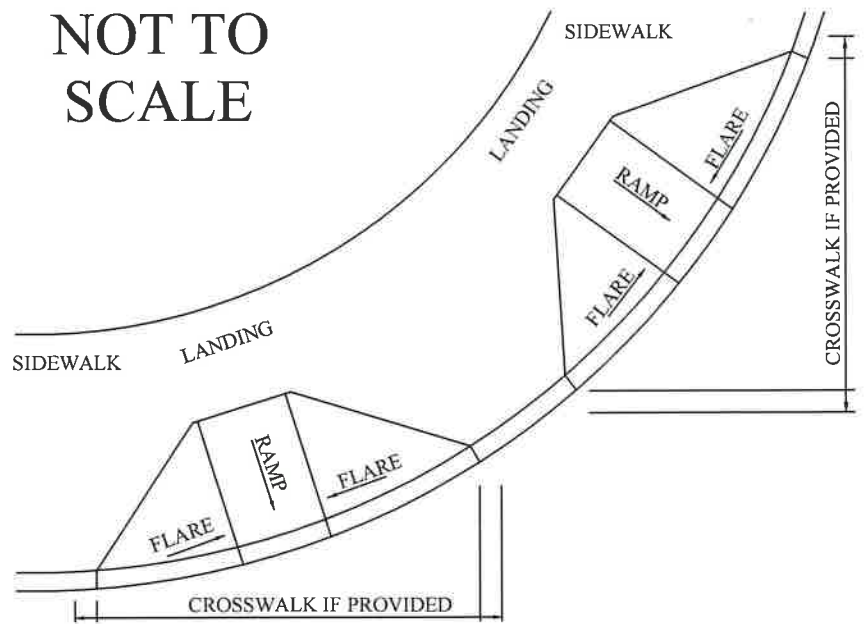
REVISIONS

BY: APR'D: DATE:

			/ /	CHECKED: F.F.	DATE: 06/21/22
			/ /	DRAWN: G.C.V.	DWG No.: 414 (1 of 3)

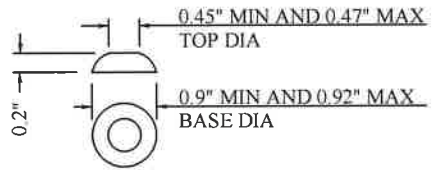


DETAIL B
TYPICAL ONE-RAMP
CORNER INSTALLATION
 SEE NOTES 1 AND 3

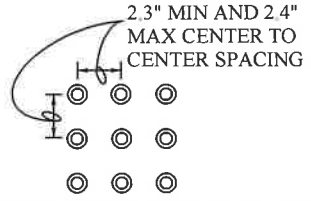


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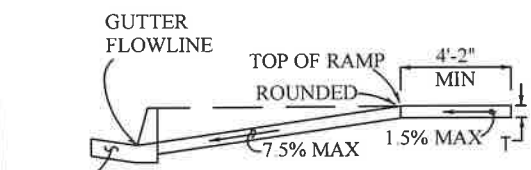
DETAIL A
TYPICAL TWO - RAMP CORNER INSTALLATION
 SEE NOTE 1



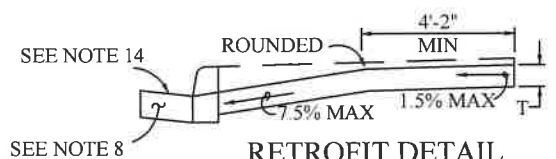
RAISED TRUNCATED DOME



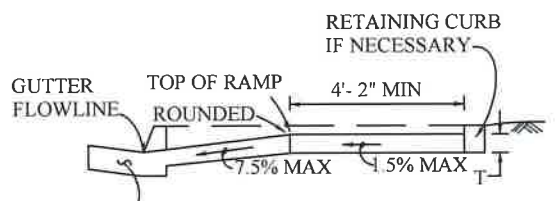
RAISED TRUNCATED DOME PATTERN (IN - LINE)
DETECTABLE WARNING SURFACE
 SEE NOTE 10



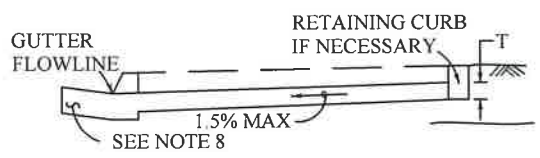
SEE NOTE 8
SECTION A-A



RETROFIT DETAIL
EXISTING CURB AND SIDEWALK



SEE NOTE 8
SECTION B-B
DEPRESS ENTIRE SIDEWALK AS REQUIRED



SECTION C-C



COUNTY OF IMPERIAL
 DEPARTMENT OF PUBLIC WORKS
 EL CENTRO, CALIFORNIA

PEDESTRIAN RAMP AND CURB RETURN

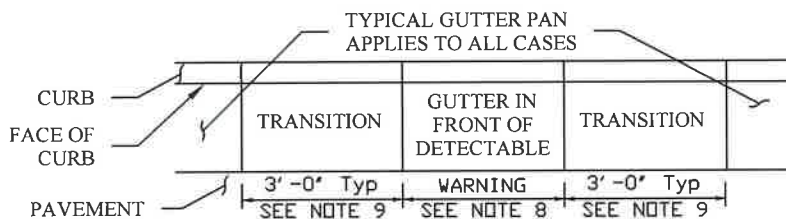
APPROVED BY:
John Gay
 JOHN A. GAY, P.E.
 DIRECTOR OF PUBLIC WORKS

DATE: *7/7/2022*

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			/ /	DRAWN: G.C.V.	DWG No.: 414 (2 of 3)
			/ /		

NOTES:

1. AS SITE CONDITIONS DICTATE, CASE A THROUGH CASE G CURB RAMPS MAY BE USED FOR CORNER INSTALLATIONS SIMILAR TO THOSE SHOWN IN DETAIL A AND DETAIL B. THE CASE OF CURB RAMPS USED IN DETAIL A DO NOT HAVE TO BE THE SAME. CASE A THROUGH THE SAME CASE G CURB RAMPS ALSO MAY BE USED AT MID BLOCK LOCATIONS, ON SITE CONDITIONS DICTATE. FOR SPECIFIC SITE CONDITION CONFIGURATION, INCLUDING THE CONFORM TO EXISTING SIDEWALK, SEE PROJECT PLANS.
2. IF DISTANCE FROM CURB TO BACK OF SIDEWALK IS TOO SHORT TO ACCOMMODATE RAMP AND 4'-2" PLATFORM (LANDING) AS SHOWN IN CASE A, THE SIDEWALK MAY BE DEPRESSED LONGITUDINALLY AS IN CASE B, OR C OR MAY BE WIDENED AS IN CASE D.
3. WHEN RAMP IS LOCATED IN CENTER OF CURB RETURN, CROSSWALK CONFIGURATION MUST BE SIMILAR TO THAT SHOWN FOR DETAIL B.
4. AS SITE CONDITIONS DICTATE, THE RETAINING CURB SIDE AND THE FLARED SIDE OF THE CASE G RAMP SHALL BE CONSTRUCTED IN REVERSED POSITION.
5. THE RAMP PORTION OF THE CURB RAMP IS A TYPICAL RECTANGLE, UNLESS MODIFIED IN THE PROJECT PLANS.
6. SIDE SLOPE OF RAMP FLARES VARY UNIFORMLY FROM A MAXIMUM OF 9.0% AT CURB TO CONFORM WITH LONGITUDINAL SIDEWALK SLOPE ADJACENT TO TOP OF THE RAMP, EXCEPT IN CASE C AND CASE F.
7. THE ADJACENT SURFACES AT TRANSITIONS AT CURB RAMPS TO WALKS, GUTTERS, AND STREETS SHALL BE AT THE SAME LEVEL.
8. COUNTER SLOPES OF ADJOINING GUTTERS AND ROAD SURFACES IMMEDIATELY ADJACENT TO AND WITHIN 24" OF THE CURB RAMP SHALL NOT BE STEEPER THAN 20H : 1V (5.0 %). GUTTER PAN SLOPE SHALL NOT EXCEED 1" OF DEPTH FOR EACH 2'-0" OF WIDTH.
9. TRANSITION GUTTER PAN SLOPE FROM 1" OF DEPTH FOR EACH 2'-0" OF WIDTH TO MATCH TYPICAL GUTTER.
10. THE DETECTABLE WARNING SURFACE WILL BE A RECTANGLE AS SHOWN AT BACK OF CURB, UNLESS MODIFIED IN THE PROJECT PLANS. CURB RAMPS SHALL HAVE A DETECTABLE WARNING SURFACE THAT EXTENDS THE FULL WIDTH AND 3'-0" DEPTH OF THE RAMP. DETECTABLE WARNING SURFACES SHALL EXTEND THE FULL WIDTH OF THE RAMP EXCEPT A MAXIMUM GAP OF 1" IS ALLOWED ON EACH SIDE OF THE RAMP. DETECTABLE WARNING SURFACES SHALL CONFORM TO THE REQUIREMENTS IN THE STANDARD SPECIFICATIONS.
11. SIDEWALK AND RAMP THICKNESS, "T", SHALL BE 4" MINIMUM. ALL METAL FORM STAKES MUST HAVE PROTECTIVE DEVICES SUCH AS REBAR CAPS INSTALLED AT ALL TIMES DURING USE TO ADEQUATELY ENSURE PUBLIC SAFETY. EXPANSION JOINTS TO BE INSTALLED AT ALL B.C.'S, E.C.'S, CURB RETURNS AND STRUCTURES IN ADDITION TO 45' O.C. FOR JOINTS DETAILS SEE STD. DWG. 400. SIDEWALK AND CURB SHALL NOT BE POURED MONOLITHIC. SCARIFY AND COMPACT 12" BELOW SUBGRADE TO 90 PERCENT (MINIMUM) OF MAXIMUM DENSITY PER ASTM D-1557 AND MAINTAIN MOISTURE CONTENT OF 18+/-2% FOR ALL LOCATIONS UNDERNEATH CONCRETE SIDEWALK. CONTIGUOUS SIDEWALK SHALL BE CLASS "1" CONCRETE CONTAINING 7 SACKS OF CEMENT PER CUBIC YARD WHICH SHALL ATTAIN A 28-DAY COMPRESSIVE STRENGTH OF 4,500 PSI IN ACCORDANCE WITH ASTM C39/C39M-99 AND SHALL CONTAIN 1-1/2 LBS. POLYPROPYLENE FIBER PER CUBIC YARD. POLYPROPYLENE FIBER BY FIBERMESH CO., FORTA MONO, O.A.E.
12. UTILITY PULL BOXES, MANHOLES, VAULTS AND ALL OTHER UTILITY FACILITIES WITHIN THE BOUNDARIES OF THE CURB RAMP SHALL BE RELOCATED OR ADJUSTED TO GRADE BY THE OWNER PRIOR TO, OR IN CONJUNCTION WITH, CURB RAMP CONSTRUCTION.
13. DETECTABLE WARNING SURFACE MAY HAVE TO BE CUT TO ALLOW REMOVAL OF UTILITY COVERS WHILE MAINTAINING DETECTABLE WARNING WIDTH AND DEPTH.
14. DETAILS SHALL CONFORM TO LATEST VERSION OF CALTRANS STANDARD PLANS.



GUTTER PAN TRANSITION



COUNTY OF IMPERIAL
DEPARTMENT OF PUBLIC WORKS
EL CENTRO, CALIFORNIA

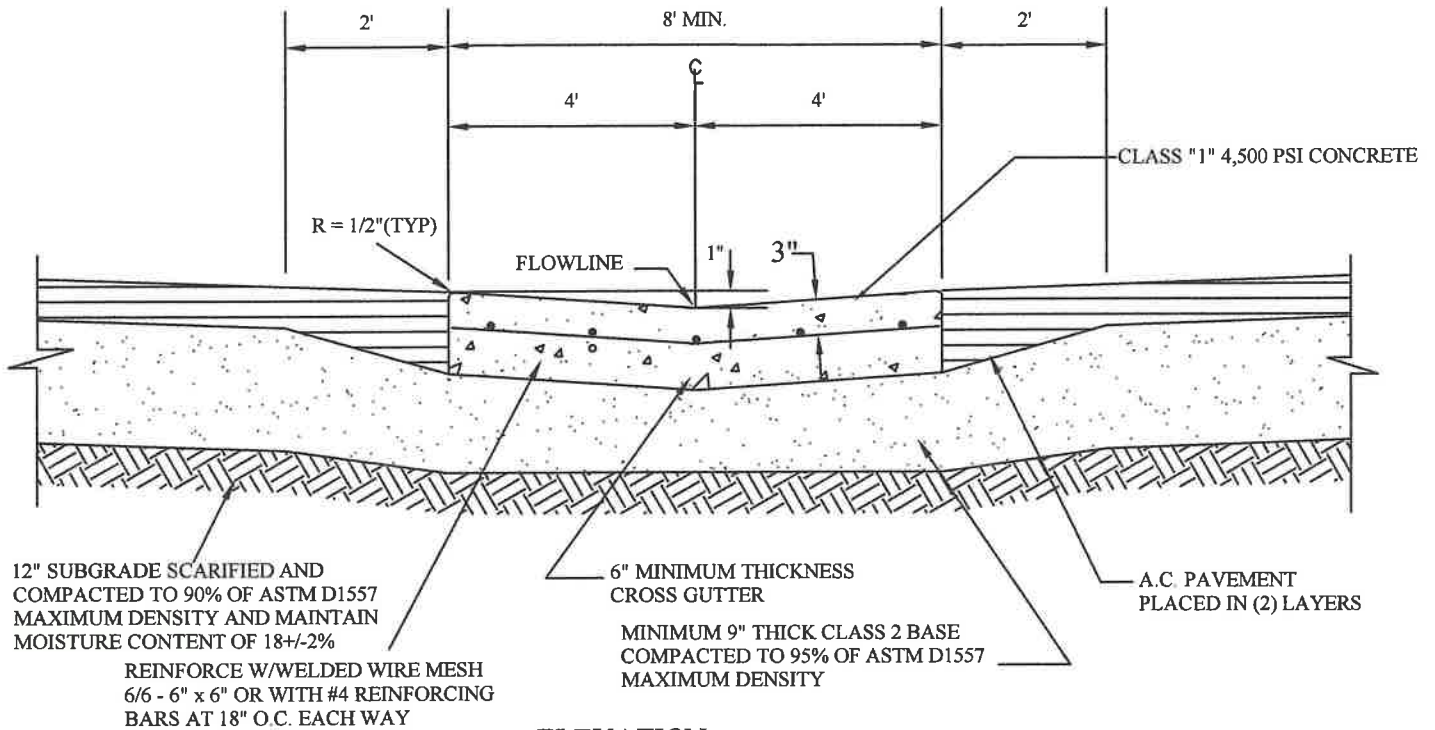
PEDESTRIAN RAMP AND CURB RETURN

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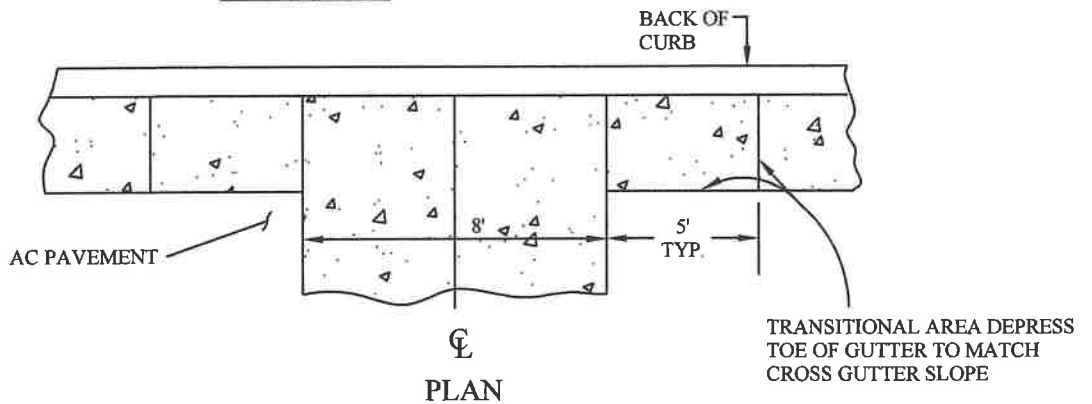
John Gay
JOHN A. GAY, P.E.
DIRECTOR OF PUBLIC WORKS

DATE: *7/7/2022*

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			/ /	F.F.	05/24/22
			/ /	G.C.V.	414 (3 of 3)



ELEVATION



PLAN

NOT TO SCALE

NOTES:

1. ALL METAL FORM STAKES MUST HAVE PROTECTIVE DEVICES SUCH AS REBAR CAPS INSTALLED AT ALL TIMES DURING USE TO ADEQUATELY ENSURE PUBLIC SAFETY.
2. MID-BLOCK CROSS GUTTER SHALL BE CLASS "1" CONCRETE CONTAINING 7 SACKS MIN. OF CEMENT PER CUBIC YARD WHICH SHALL ATTAIN A 28-DAY COMPRESSIVE STRENGTH OF 4500 PSI IN ACCORDANCE WITH ASTM C39/C39M-99 AND SHALL CONTAIN 1-1/2 LBS. POLYPROPYLENE FIBER PER CUBIC YARD. POLYPROPYLENE FIBER BY FIBERMESH CO., FORTA MONO, O.A.E.
3. THIS DETAIL MAY BE USED FOR OTHER SIMILAR APPLICATIONS SUCH AS CONCRETE RIBBON GUTTERS.



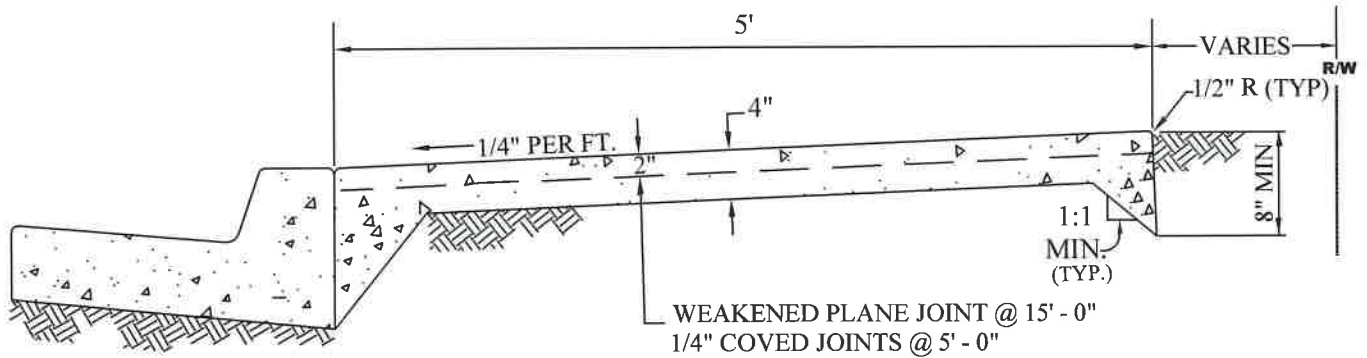
COUNTY OF IMPERIAL
DEPARTMENT OF PUBLIC WORKS
EL CENTRO, CALIFORNIA

MID-BLOCK CROSS GUTTER

APPROVED BY:
John Gay
JOHN A. GAY
DIRECTOR OF PUBLIC WORKS

DATE: *7/7/2022*

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			/ /	F.F.	06/21/22
			/ /	G.C.V.	DWG No.: 415



NOTE:

1. ALL METAL FORM STAKES MUST HAVE PROTECTIVE DEVICES SUCH AS REBAR CAPS INSTALLED AT ALL TIMES DURING USE TO ADEQUATELY ENSURE PUBLIC SAFETY.
2. EXPANSION JOINTS TO BE INSTALLED AT ALL B.C.'S, E.C.'S, CURB RETURNS AND STRUCTURES IN ADDITION TO 45' O.C.
3. FOR JOINTS DETAILS SEE DWG. 400.
4. SIDEWALK AND CURB SHALL NOT BE POURED MONOLITHIC.
5. SCARIFY AND COMPACT 12" BELOW SUBGRADE TO 90 PERCENT (MINIMUM) OF MAXIMUM DENSITY PER ASTM D-1557 AND MAINTAIN MOISTURE CONTENT OF 18+/-2% FOR ALL LOCATIONS UNDERNEATH CONCRETE SIDEWALK.
6. CONTIGUOUS SIDEWALK SHALL BE CLASS "1" CONCRETE CONTAINING 7 SACKS OF CEMENT PER CUBIC YARD WHICH SHALL ATTAIN A 28-DAY COMPRESSIVE STRENGTH OF 4,500 PSI IN ACCORDANCE WITH ASTM C39/C39M-99 AND SHALL CONTAIN 1-1/2 LBS. POLYPROPYLENE FIBER PER CUBIC YARD. POLYPROPYLENE FIBER BY FIBERMESH CO., FORTA MONO, O.A.E.

NOT TO SCALE



COUNTY OF IMPERIAL

DEPARTMENT OF PUBLIC WORKS
EL CENTRO, CALIFORNIA

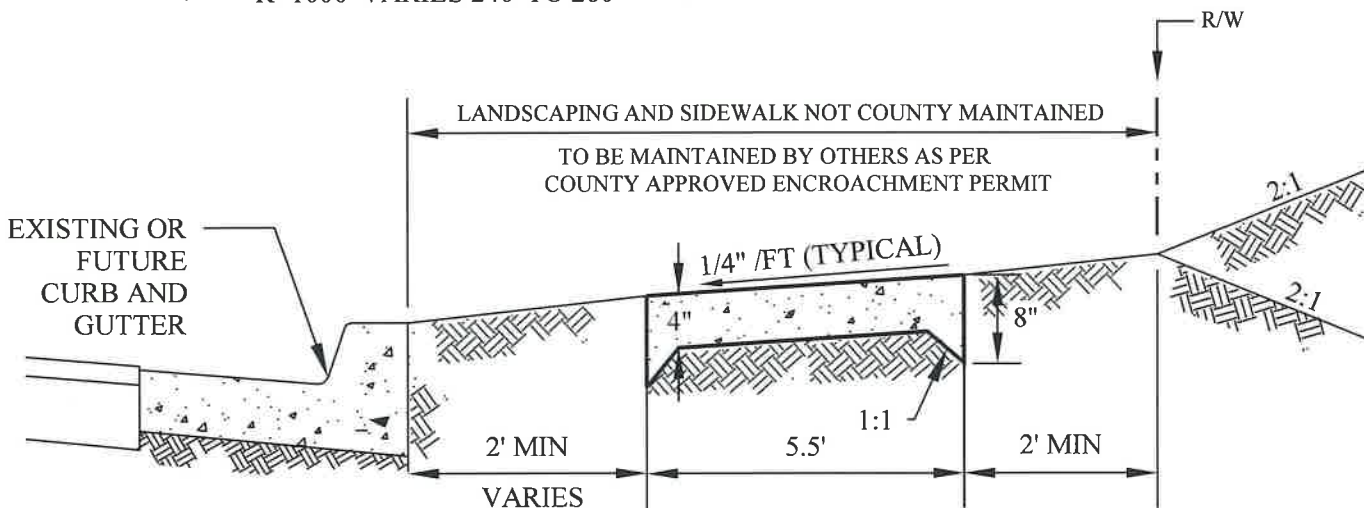
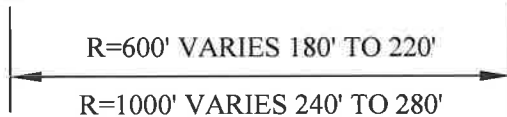
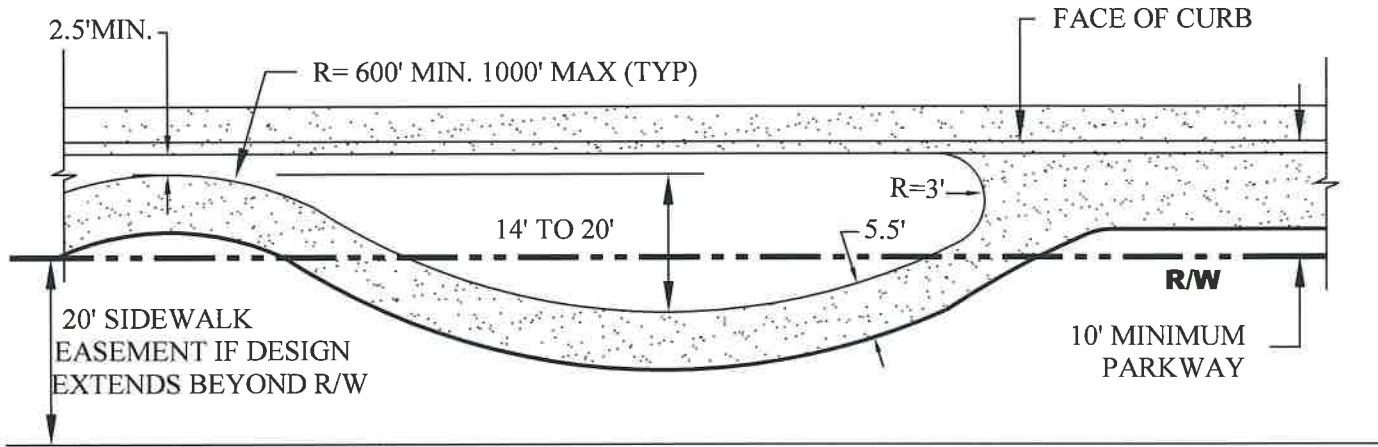
CONTIGUOUS SIDEWALK

APPROVED BY:

John Gay
JOHN A. GAY, P.E.
DIRECTOR OF PUBLIC WORKS

DATE: *7/7/2022*

REVISIONS	BY:	APR'D:	DATE:	CHECKED:	DATE:
			/ /	F.F.	06/21/22
			/ /	G.C.V.	420



NOT TO SCALE

NOTES:

1. RADII FOR CURVED SIDEWALK SHALL BE BETWEEN 600' AND 1000'.
2. ALL RADII SHALL BE STAGGERED.
3. EASEMENT REQUIRED FOR SIDEWALK SECTIONS THAT EXTEND BEYOND RIGHT OF WAY LINE.
4. SIDEWALK SHALL BE A MINIMUM OF 5.0' IN WIDTH ADJACENT TO CURB, 5.5' AWAY FROM CURB.
5. SIDEWALK SHALL BE 2.5' AWAY FROM CURB FACE EXCEPT AT CURB RETURNS AND BUS STOPS.
6. SIDEWALK LAYOUT ON PLANS IS CONCEPTUAL ONLY. APPROVAL OF THE FINAL SIDEWALK LAYOUT SHALL BE MADE IN THE FIELD AND ADJUSTED AS NECESSARY TO MEET FIELD CONDITIONS AS APPROVED BY THE INSPECTOR PRIOR TO FINAL CONSTRUCTION.
7. ALL NOTES SHOWN ON COUNTY STD. DWG. 420 SHALL ALSO APPLY.
8. SCARIFY AND COMPACT 12" BELOW SUBGRADE TO 90 PERCENT (MINIMUM) OF MAXIMUM DENSITY PER ASTM D-1557 AND MAINTAIN MOISTURE CONTENT OF 18+/-2%. FOR ALL LOCATIONS UNDERNEATH CONCRETE SIDEWALK.
9. MEANDERING SIDEWALK SHALL BE 4" THICK, CLASS "1" CONCRETE CONTAINING 7 SACKS OF CEMENT PER CUBIC YARD WHICH SHALL ATTAIN A 28-DAY COMPRESSIVE STRENGTH OF 4,500 PSI IN ACCORDANCE WITH ASTM C39/C39M-99 AND SHALL CONTAIN 1-1/2 LBS. POLYPROPYLENE FIBER PER CUBIC YARD. POLYPROPYLENE FIBER BY FIBERMESH CO., FORTA MONO, O.A.E.



COUNTY OF IMPERIAL
DEPARTMENT OF PUBLIC WORKS
EL CENTRO, CALIFORNIA

MEANDERING SIDEWALK

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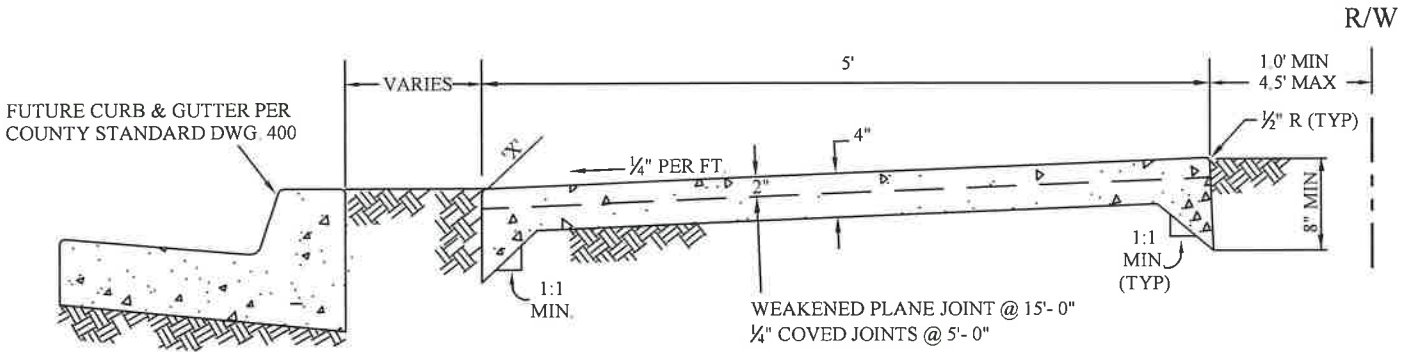
John Gay
JOHN A. GAY, P.E.
DIRECTOR OF PUBLIC WORKS

DATE: *7/7/2022*

REVISIONS

BY: APR'D: DATE:

			/ /	CHECKED: F.F.	DATE: 06/21/22
			/ /	DRAWN: G.C.V.	DWG No.: 425



NOTES:

1. APPLICABILITY OF THIS SIDEWALK DETAIL SHALL BE DETERMINED BY PUBLIC WORKS DIRECTOR.
2. FOR APPLICATION WHERE NO CURB AND GUTTER IS PROPOSED AT THE TIME OF SIDEWALK CONSTRUCTION.
3. EXPANSION JOINTS TO BE INSTALLED AT ALL B.C.'S, E.C.'S, CURB RETURNS AND STRUCTURES IN ADDITION TO 45' O.C.
4. FOR JOINTS DETAILS SEE DWG. 400.
5. SCARIFY AND COMPACT 12" BELOW SUBGRADE TO 90 PERCENT (MINIMUM) OF MAXIMUM DENSITY PER ASTM D-1557 AND MAINTAIN MOISTURE CONTENT OF 18+/-2% FOR ALL LOCATIONS UNDERNEATH CONCRETE SIDEWALK.
6. ELEVATION 'X' EQUAL TO ROAD CENTERLINE GRADE UNLESS OTHERWISE APPROVED BY PUBLIC WORKS DIRECTOR
7. ALL METAL FORM STAKES MUST HAVE PROTECTIVE DEVICES SUCH AS REBAR CAPS INSTALLED AT ALL TIMES DURING USE, TO ADEQUATELY ENSURE PUBLIC SAFETY.
8. NON-CONTIGUOUS SIDEWALK SHALL BE 4" THICK CLASS "1" CONCRETE CONTAINING 7 SACKS OF CEMENT PER CUBIC YARD WHICH SHALL ATTAIN A 28-DAY COMPRESSIVE STRENGTH OF 4,500 PSI IN ACCORDANCE WITH ASTM C39/C39M-99 AND SHALL CONTAIN 1-1/2 LBS. POLYPROPYLENE FIBER PER CUBIC YARD. POLYPROPYLENE FIBER BY FIBERMESH CO., FORTA MONO, O.A.E.

NOT TO
SCALE



COUNTY OF IMPERIAL
DEPARTMENT OF PUBLIC WORKS
EL CENTRO, CALIFORNIA

NON-CONTIGUOUS
SIDEWALK

APPROVED BY:

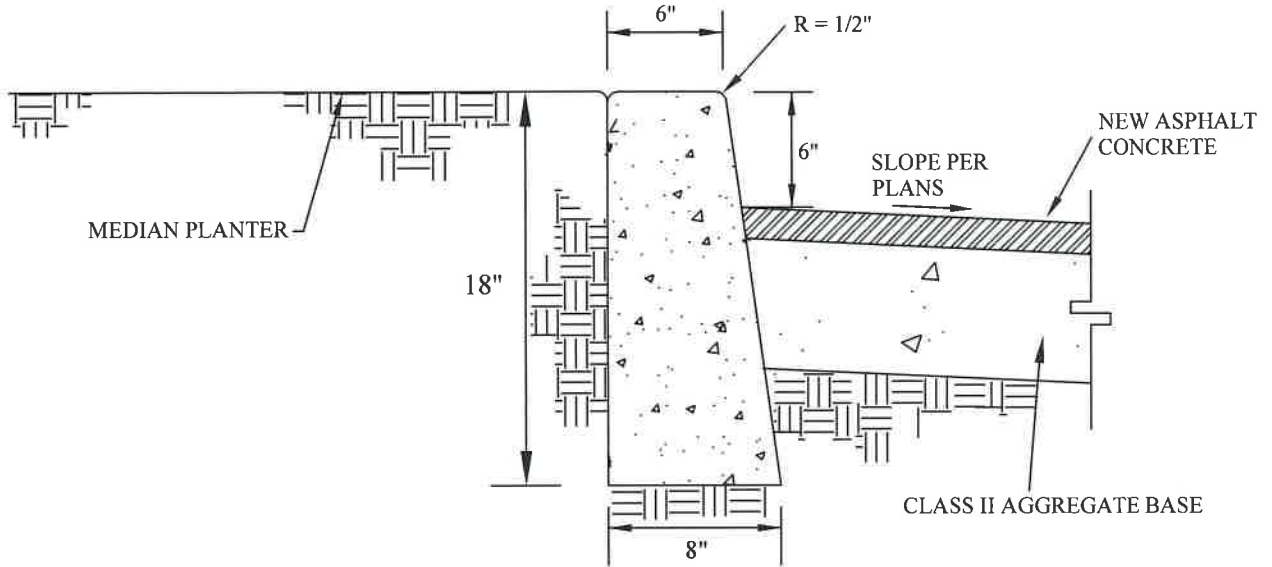
John Gay
JOHN A. GAY, P.E.
DIRECTOR OF PUBLIC WORKS

DATE: 7/7/2022

REVISIONS

BY: APR'D: DATE:

			/ /	CHECKED: F.F.	DATE: 06/21/22
			/ /	DRAWN: A.G.	DWG No.: 426



NOTES:

1. ALL METAL FORM STAKES MUST HAVE PROTECTIVE DEVICES SUCH AS REBAR CAPS INSTALLED AT ALL TIMES DURING USE TO ADEQUATELY ENSURE PUBLIC SAFETY.
2. EXPANSION JOINTS TO BE INSTALLED AT ALL B.C.'S, E.C.'S CURB RETURNS AND STRUCTURES IN ADDITION TO 45' O.C.
3. THE CURB EDGES SHALL BE PLACED TRUE TO LINE AND GRADE. VERTICAL ELEVATIONS SHALL NOT VARY MORE THAN: 0.01' WITH A MAXIMUM VARIANCE OF 0.02' FROM DESIGN GRADE OCCURING IN ANY GIVEN 100 FOOT SECTION. THE HORIZONTAL CURB EDGES SHALL NOT VARY MORE THAN 1/4" IN ANY GIVEN 100 FOOT SECTION.
4. SCARIFY AND COMPACT 12" BELOW SUBGRADE TO 90 PERCENT (MINIMUM) OF MAXIMUM DENSITY PER ASTM D-1557 AND MAINTAIN MOISTURE CONTENT OF 18+/-2%.
5. THE STANDING CURB WILL HAVE THE SAME CONDITIONS FOR CONSTRUCTION ADJACENT TO THE PROPOSED PLANTERS.
6. FREE STANDING CURB SHALL BE CLASS "1" CONCRETE CONTAINING 7 SACKS OF CEMENT PER CUBIC YARD WHICH SHALL ATTAIN A 28-DAY COMPRESSIVE STRENGTH OF 4,500 PSI IN ACCORDANCE WITH ASTM C39/C39M-99 AND SHALL CONTAIN 1-1/2 LBS. POLYPROPYLENE FIBER PER CUBIC YARD. POLYPROPYLENE FIBER BY FIBERMESH CO., FORTA MONO, O.A.E.

NOT TO SCALE



COUNTY OF IMPERIAL

DEPARTMENT OF PUBLIC WORKS
EL CENTRO, CALIFORNIA

FREE STANDING
MEDIAN CURB

APPROVED BY:

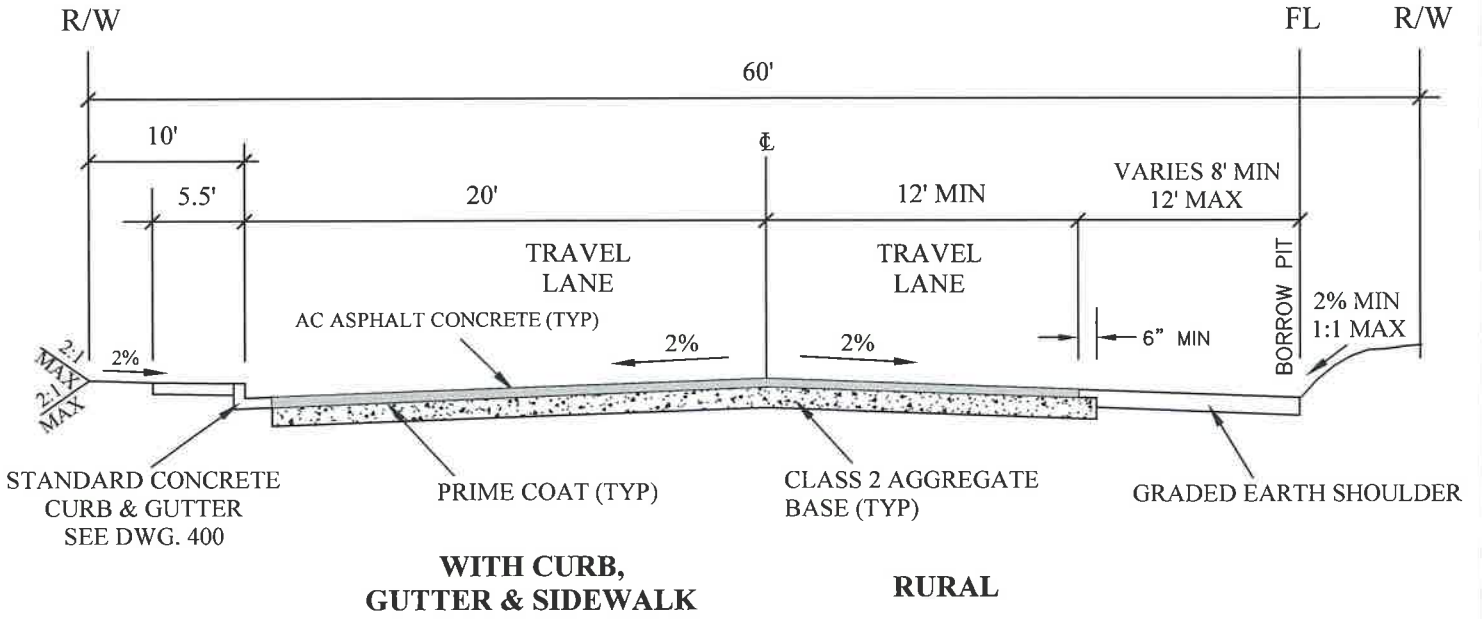
John Gay
JOHN A GAY, P.E.
DIRECTOR OF PUBLIC WORKS

DATE: 7/7/2022

REVISIONS

BY: APR'D: DATE:

			/ /	CHECKED: F.F.	DATE: 06/21/22
			/ /	DRAWN G.C.V.	DWG No. 427



LOCAL STREET

**NOT TO
SCALE**

NOTES:

1. SEE APPROVED PLANS AND DWG. 440 FOR ROAD STRUCTURAL SECTIONS.
2. FOR RURAL SECTION, MINIMUM PAVED WIDTH IS 12' FOR EACH LANE A MINIMUM OF TWO LANES SHALL BE PROVIDED UNLESS OTHERWISE REQUIRED BY THE PUBLIC WORKS DIRECTOR.
3. FOR ALL CONCRETE FORM WORK, IF APPLICABLE, ALL METAL FORM STAKES MUST HAVE PROTECTIVE DEVICES SUCH AS REBAR CAPS INSTALLED AT ALL TIMES DURING USE TO ADEQUATELY ENSURE PUBLIC SAFETY.
4. INTENDED FOR AREAS NEAR FUTURE RESIDENTIAL DEVELOPMENTS OR TOWNSITES.



COUNTY OF IMPERIAL

DEPARTMENT OF PUBLIC WORKS
EL CENTRO, CALIFORNIA

LOCAL STREET

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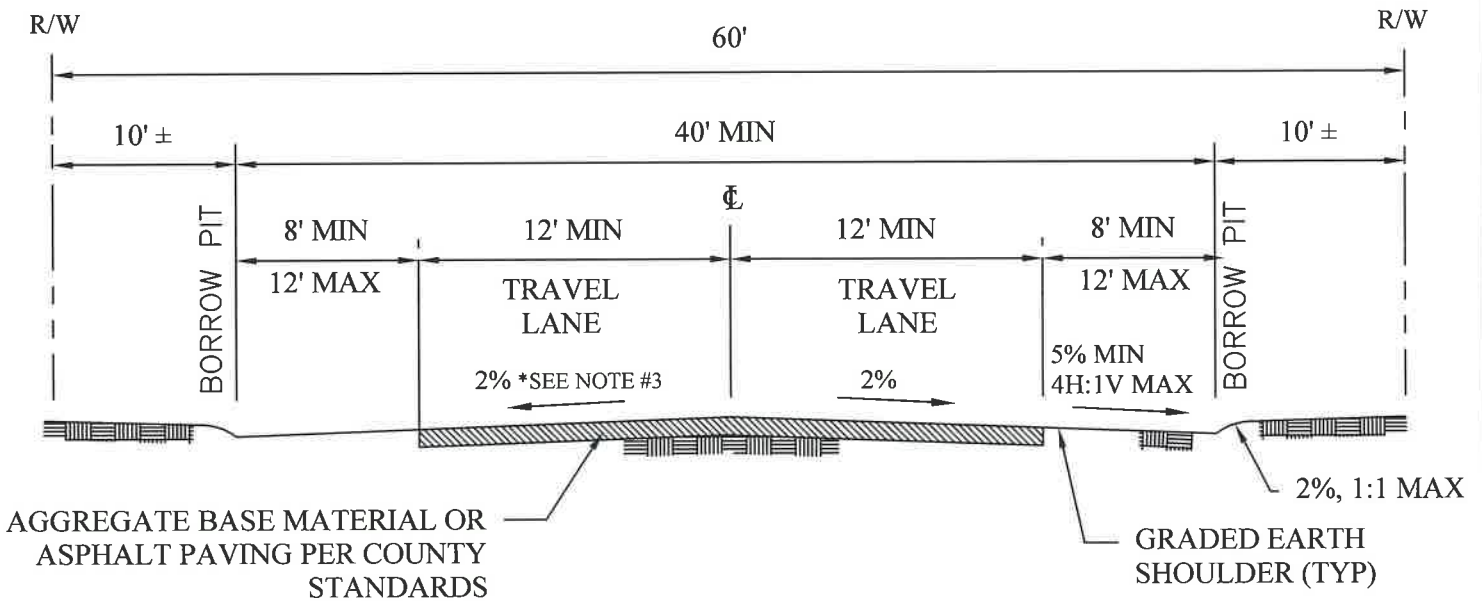
John Gay
JOHN A. GAY, P.E.
DIRECTOR OF PUBLIC WORKS

DATE: 7/7/2022

REVISIONS

BY: APR'D: DATE:

			/ /	CHECKED: F.F.	DATE: 06/21/22
			/ /	DRAWN: G.C.V.	DWG No.: 430



RURAL LOCAL ROAD

NOT TO SCALE

NOTES:

1. SEE APPROVED PLANS AND DWG. 440 FOR ROAD STRUCTURAL SECTIONS.
2. FOR ALL CONCRETE FORM WORK, IF APPLICABLE, ALL METAL FORM STAKES MUST HAVE PROTECTIVE DEVICES SUCH AS REBAR CAPS INSTALLED AT ALL TIMES DURING USE TO ADEQUATELY ENSURE PUBLIC SAFETY.
3. ONE WAY CROSS SLOPE MAY BE CONSIDERED BY COUNTY ROAD COMMISSIONER.
4. INTENDED FOR RURAL AREAS OUTSIDE RESIDENTIAL DEVELOPMENTS AND OUTSIDE OF TOWN SITES.



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TYPICAL CROSS SECTION RURAL LOCAL ROAD

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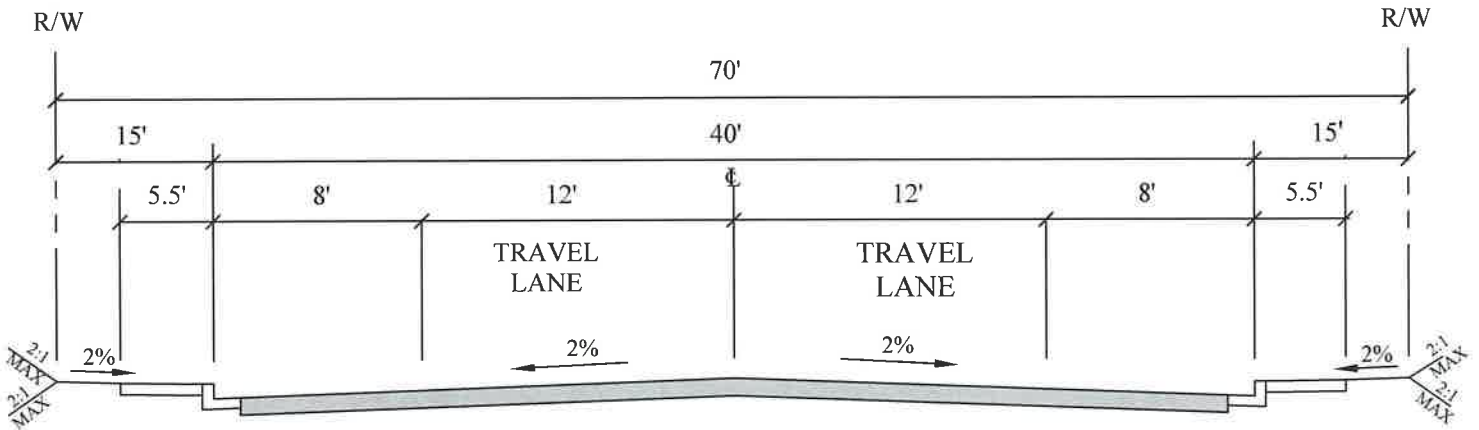
John Gay
JOHN A. GAY, P.E.
DIRECTOR OF PUBLIC WORKS

DATE: *7/7/2022*

REVISIONS

BY: APR'D: DATE:

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			/ /	DRAWN: G.C.V.	DWG No.: 430A



2 LANE MINOR COLLECTOR/INDUSTRIAL STREET - PARKING

NOT TO
SCALE

NOTES:

1. SEE APPROVED PLANS AND COUNTY DWG. 440 FOR ROAD STRUCTURAL SECTIONS.
2. FOR RURAL SECTION, MINIMUM PAVED WIDTH IS 12' UNLESS OTHERWISE REQUIRED BY THE PUBLIC WORKS DIRECTOR.
3. FOR ALL CONCRETE FORM WORK, IF APPLICABLE, ALL METAL FORM STAKES MUST HAVE PROTECTIVE DEVICES SUCH AS REBAR CAPS INSTALLED AT ALL TIMES DURING USE TO ADEQUATELY ENSURE PUBLIC SAFETY.



COUNTY OF IMPERIAL

DEPARTMENT OF PUBLIC WORKS
EL CENTRO, CALIFORNIA

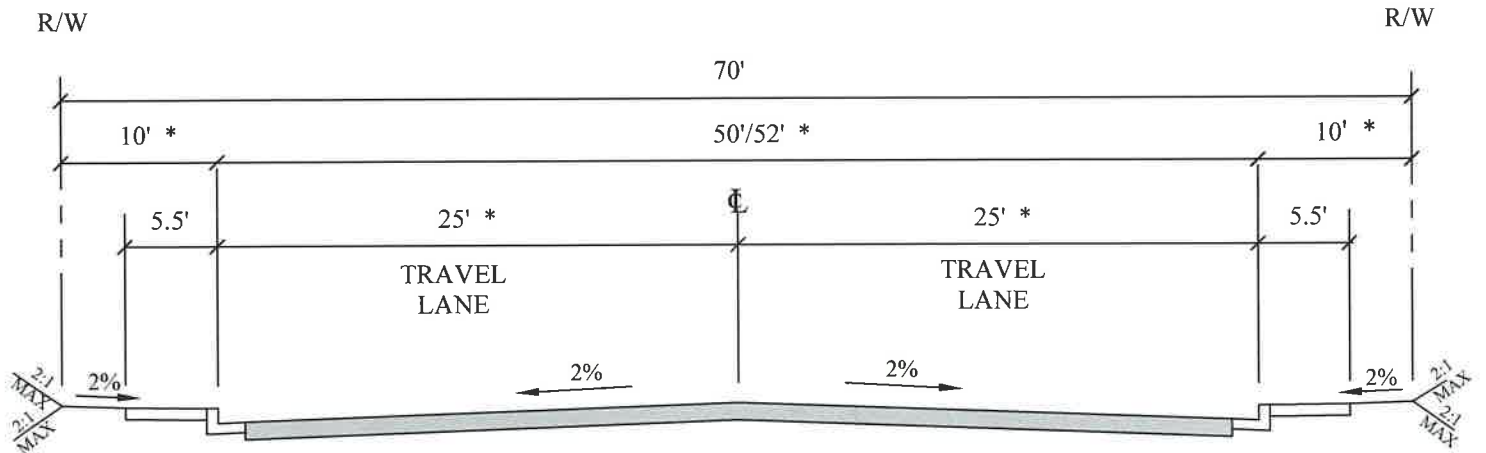
TYPICAL STREET CROSS SECTIONS

APPROVED BY:

John Gay
JOHN A. GAY, P.E.
DIRECTOR OF PUBLIC WORKS

DATE: *7/7, 2022*

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			/ /	G.C.V.	431A



4 LANE MINOR COLLECTOR/INDUSTRIAL STREET - NO PARKING

* THESE DIMENSIONS MAY VARY (25' TRAVEL LANE WITH 10' PARKWAY OR 26' TRAVEL LANE WITH 9' PARKWAY) AS APPROVED BY DIRECTOR OF PUBLIC WORKS.

NOT TO SCALE

NOTES:

1. SEE APPROVED PLANS AND COUNTY DWG. 440 FOR ROAD STRUCTURAL SECTIONS.
2. FOR ALL CONCRETE FORM WORK, IF APPLICABLE, ALL METAL FORM STAKES MUST HAVE PROTECTIVE DEVICES SUCH AS METAL CAPS INSTALLED AT ALL TIMES DURING USE TO ADEQUATELY ENSURE PUBLIC SAFETY.



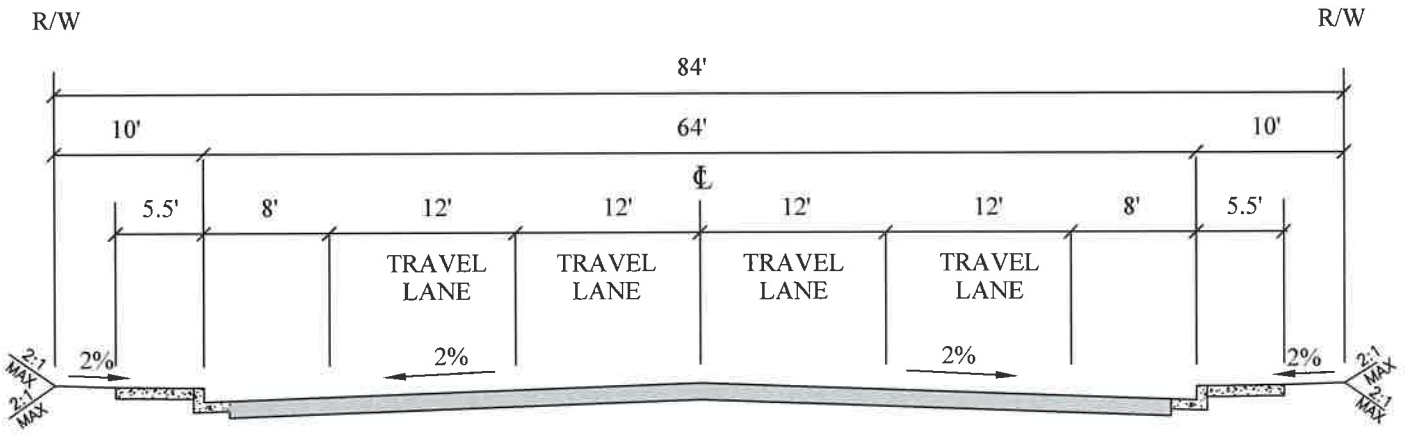
COUNTY OF IMPERIAL
DEPARTMENT OF PUBLIC WORKS
EL CENTRO, CALIFORNIA

TYPICAL STREET CROSS SECTIONS

APPROVED BY:
John A. Gay
JOHN A. GAY, P.E.
DIRECTOR OF PUBLIC WORKS

DATE: 7/7/2022

REVISIONS	BY:	APR'D:	DATE:	CHECKED:	DATE:
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			/ /	DRAWN:	DWG No.:
			/ /	G.C.	431B



4 LANE MAJOR COLLECTOR

NOT TO SCALE

NOTES:

1. SEE APPROVED PLANS AND COUNTY DWG. 440 FOR ROAD STRUCTURAL SECTIONS.
2. FOR ALL CONCRETE FORM WORK, IF APPLICABLE, ALL METAL FORM STAKES MUST HAVE PROTECTIVE DEVICES SUCH AS REBAR CAPS INSTALLED AT ALL TIMES DURING USE TO ADEQUATELY ENSURE PUBLIC SAFETY.



COUNTY OF IMPERIAL
 DEPARTMENT OF PUBLIC WORKS
 EL CENTRO, CALIFORNIA

TYPICAL STREET CROSS SECTIONS

APPROVED BY:

John Gay
 JOHN A. GAY, P.E.
 DIRECTOR OF PUBLIC WORKS

DATE: *7/7/2022*

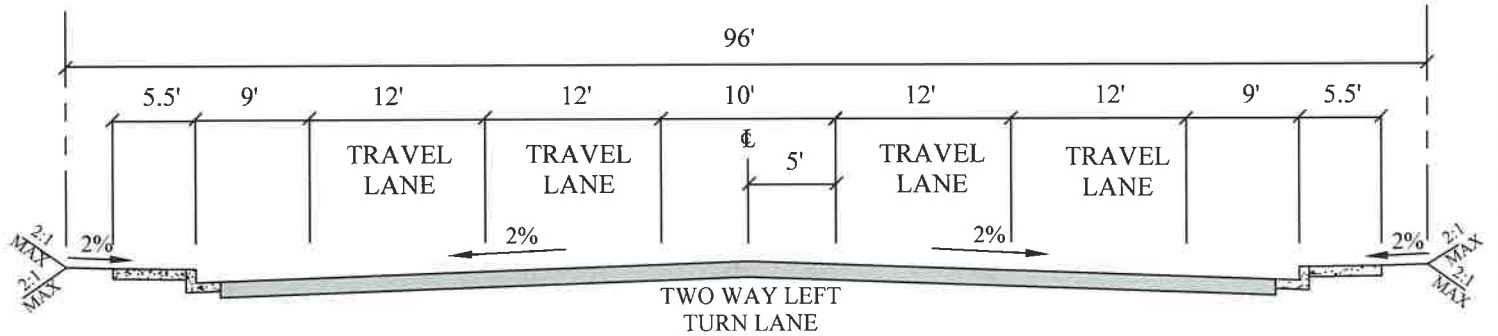
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			/ /	DRAWN: G.C.V.	DWG No. 432

R/W

R/W



INDUSTRIAL COLLECTOR

NOT TO SCALE

NOTES:

- 1. SEE APPROVED PLANS AND DWG. 440 FOR ROAD STRUCTURAL SECTIONS.
- 2. FOR ALL CONCRETE FORM WORK, IF APPLICABLE, ALL METAL FORM STAKES MUST HAVE PROTECTIVE DEVICES SUCH AS REBAR CAPS INSTALLED AT ALL TIMES DURING USE TO ADEQUATELY ENSURE PUBLIC SAFETY.



COUNTY OF IMPERIAL

DEPARTMENT OF PUBLIC WORKS
EL CENTRO, CALIFORNIA

TYPICAL STREET CROSS SECTIONS

APPROVED BY:

John A. Gay

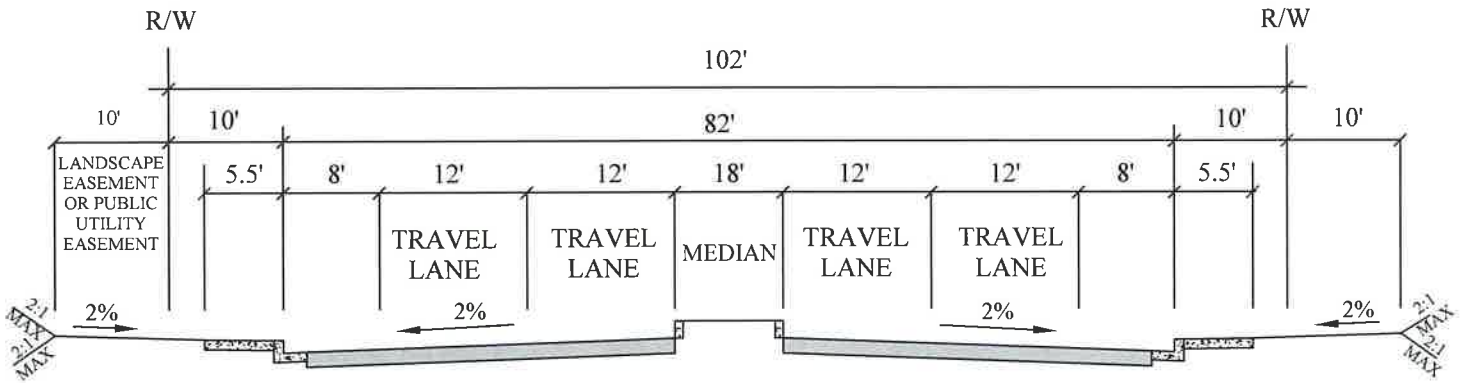
 JOHN A. GAY, P.E.
 DIRECTOR OF PUBLIC WORKS

DATE: 7 / 7 / 2022

REVISIONS

BY: APR'D: DATE:

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			/ /	DRAWN: G.C.	DWG No.: 432A



4 LANE MINOR ARTERIAL (MEDIAN WITH SINGLE OR DUAL LEFT TURN)

NOT TO SCALE

NOTES:

1. SEE APPROVED PLANS AND DWG. 440 FOR ROAD STRUCTURAL SECTIONS.
2. FOR ALL CONCRETE FORM WORK, IF APPLICABLE, ALL METAL FORM STAKES MUST HAVE PROTECTIVE DEVICES SUCH AS REBAR CAPS INSTALLED AT ALL TIMES DURING USE TO ADEQUATELY ENSURE PUBLIC SAFETY.



COUNTY OF IMPERIAL

DEPARTMENT OF PUBLIC WORKS
EL CENTRO, CALIFORNIA

TYPICAL STREET CROSS SECTIONS

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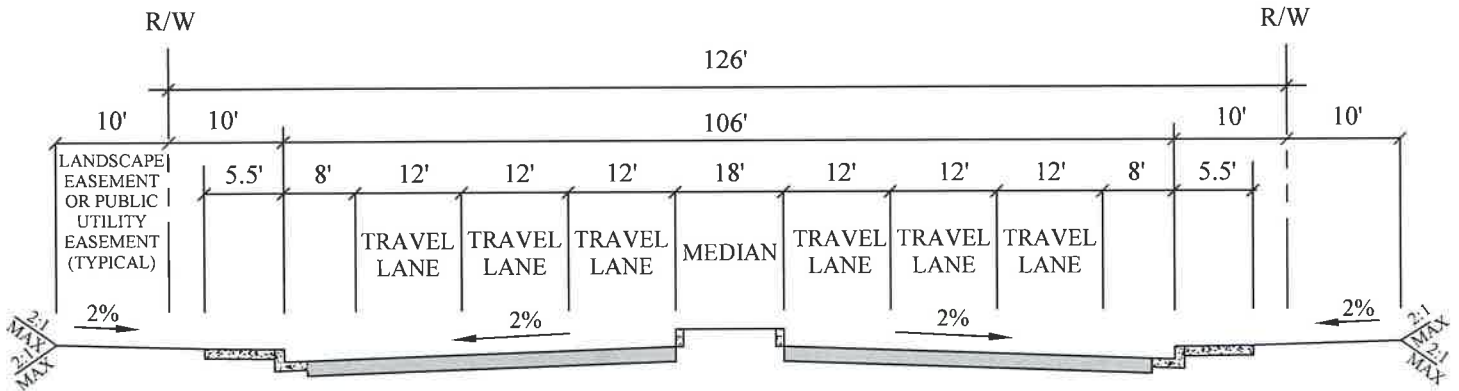
John Gay
JOHN A. GAY, P.E.
DIRECTOR OF PUBLIC WORKS

DATE: *7 / 7, 2022*

REVISIONS

BY: APR'D: DATE:

			/ /	CHECKED: F.F.	DATE: 05/16/22
			/ /	DRAWN: G.C.	DWG No.: 434



PRIME ARTERIAL (MEDIAN WITH SINGLE OR DUAL LEFT TURN)

**NOT TO
SCALE**

NOTES:

1. SEE APPROVED PLANS AND DWG. 440 FOR ROAD STRUCTURAL SECTIONS.
2. FOR ALL CONCRETE FORM WORK, IF APPLICABLE, ALL METAL FORM STAKES MUST HAVE PROTECTIVE DEVICES SUCH AS REBAR CAPS INSTALLED AT ALL TIMES DURING USE TO ADEQUATELY ENSURE PUBLIC SAFETY.



COUNTY OF IMPERIAL
DEPARTMENT OF PUBLIC WORKS
EL CENTRO, CALIFORNIA

**TYPICAL STREET
CROSS SECTIONS**

APPROVED BY:

John Gay
JOHN A. GAY, P.E.
DIRECTOR OF PUBLIC WORKS

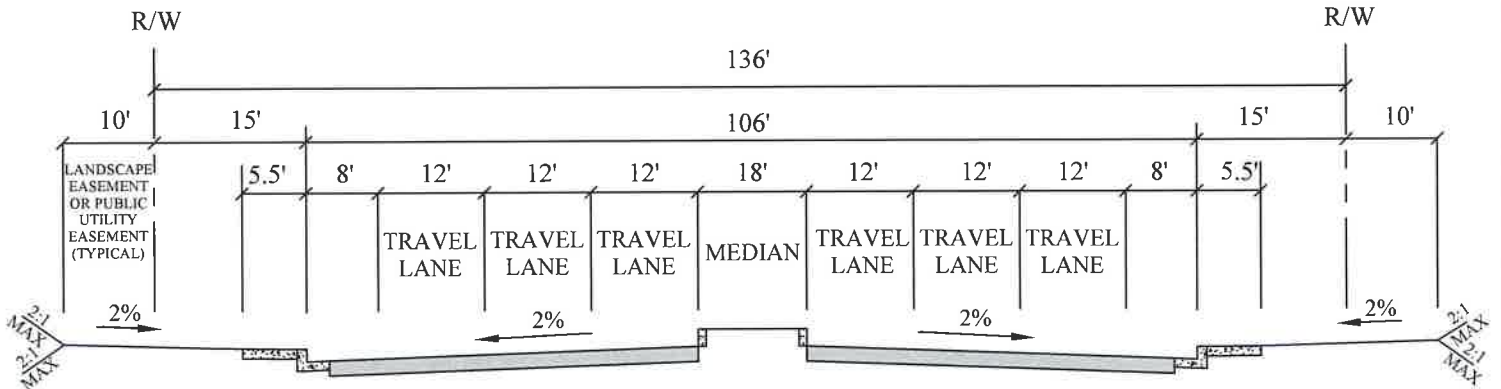
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DRAWN: G.C.V.	DWG No.: 436



PRIME ARTERIAL (MEDIAN WITH SINGLE OR DUAL LEFT TURN)

**NOT TO
SCALE**

NOTES:

1. SEE APPROVED PLANS AND DWG. 440 FOR ROAD STRUCTURAL SECTIONS.
2. FOR ALL CONCRETE FORM WORK, IF APPLICABLE, ALL METAL FORM STAKES MUST HAVE PROTECTIVE DEVICES SUCH AS REBAR CAPS INSTALLED AT ALL TIMES DURING USE TO ADEQUATELY ENSURE PUBLIC SAFETY.
3. THIS DETAIL HAS WIDER PARKWAY THAN DRAWING 436.



COUNTY OF IMPERIAL
DEPARTMENT OF PUBLIC WORKS
EL CENTRO, CALIFORNIA

**TYPICAL STREET
CROSS SECTIONS**

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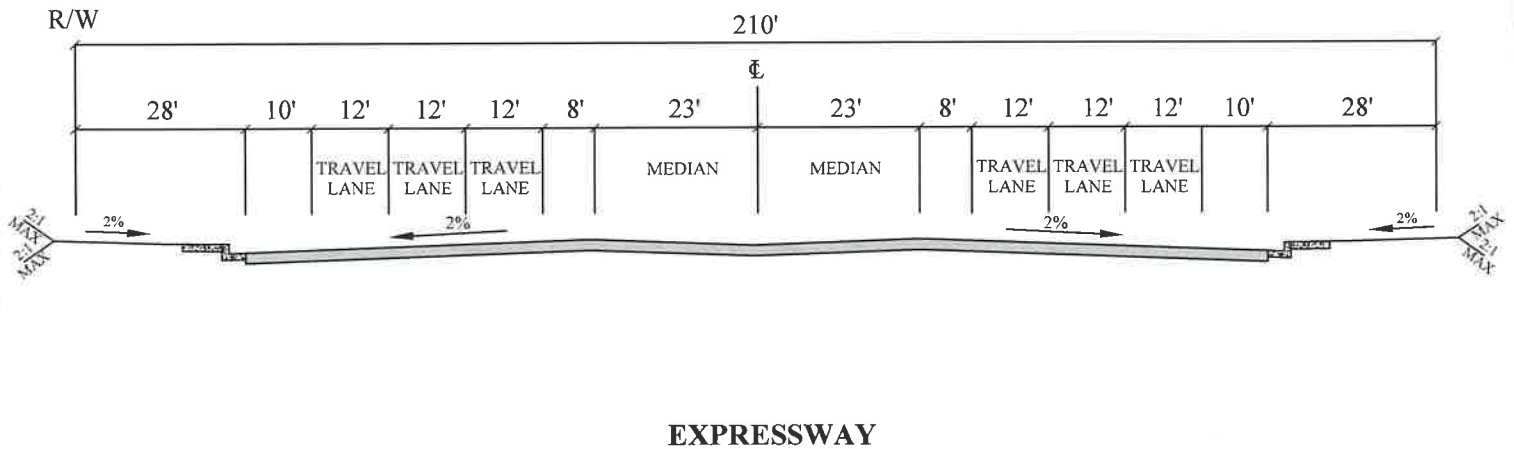
John Gay
JOHN G. GAY, P.E.
DIRECTOR OF PUBLIC WORKS

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**NOT TO
SCALE**

NOTES:

1. SEE APPROVED PLANS AND DWG. 440 FOR ROAD STRUCTURAL SECTIONS.
2. FOR ALL CONCRETE FORM WORK, IF APPLICABLE, ALL METAL FORM STAKES MUST HAVE PROTECTIVE DEVICES SUCH AS REBAR CAPS INSTALLED AT ALL TIMES DURING USE TO ADEQUATELY ENSURE PUBLIC SAFETY.



COUNTY OF IMPERIAL
DEPARTMENT OF PUBLIC WORKS
EL CENTRO, CALIFORNIA

**TYPICAL STREET
CROSS SECTIONS**

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John Gay
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DIRECTOR OF PUBLIC WORKS

DATE: 7/7, 2022

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			/ /	F.F.	06/22/22
			/ /	G.C.V.	DWG No.: 437