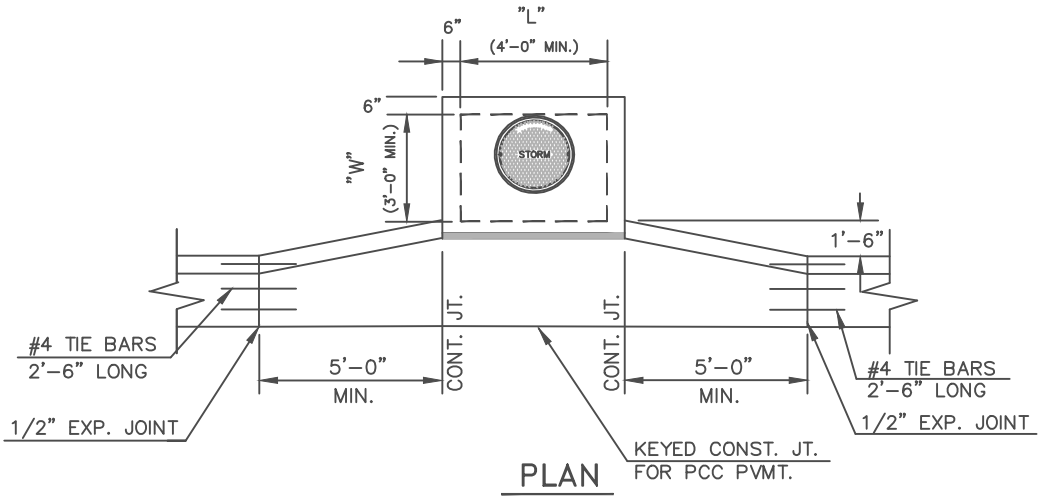
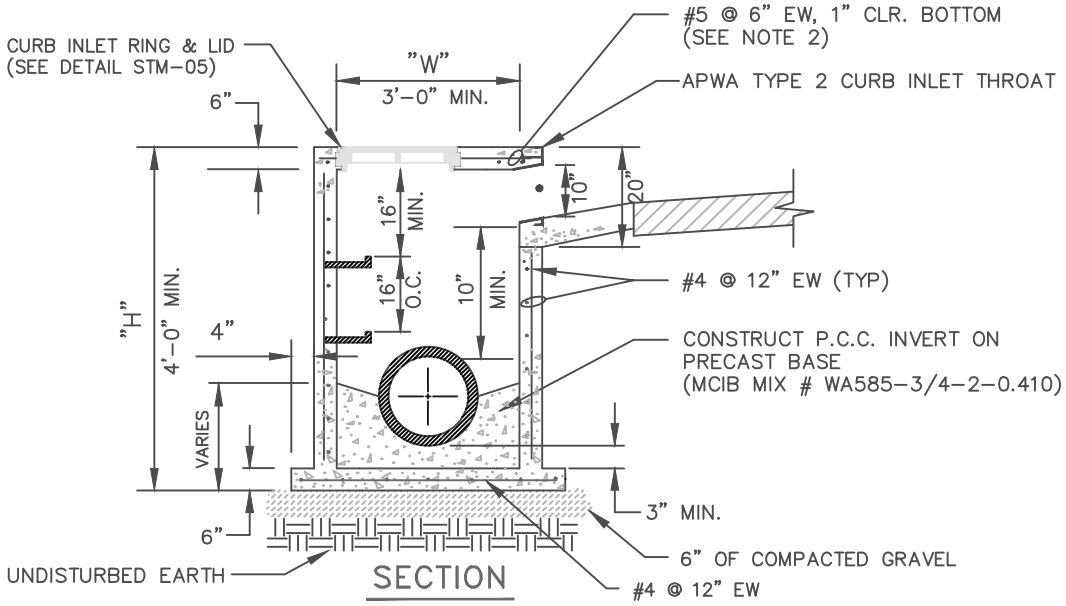


PLAN



SECTION

PRECAST CURB INLET

NOTES:
1. REMOVE LIFTING HOOKS FLUSH UPON PLACEMENT OF TOP SLAB AND GROUT AS NECESSARY TO REPAIR.
2. TOP SLAB REINFORCEMENT SHALL ALSO INCLUDE 2 #5 @ 4" DIAGONAL FOUR SIDES OF OPENING.
3. TOP SLAB SHALL BE SET @ 1/2" PER FOOT SLOPE (TYP) TO THE INLET THROAT. EXCEPTION: IF ANY PORTION OF THE TOP SLAB IS UTILIZED AS SIDEWALK, THE SLOPE SHALL MEET ADA CROSS SLOPE REQUIREMENTS (SEE DETAIL MIS-01).
4. INLET SHALL BE BACKFILLED TO WITHIN 1' OF FINISH GRADE USING KDOT AB-3 ROCK
5. ON-GRADE INLETS SHALL CONFORM TO STREET GRADE AND SUMP INLETS SHALL BE LEVEL.
6. INLET LOCATION SHALL NOT CONFLICT WITH ADA RAMPS OR CURB RETURNS.
7. RING & LID SHALL BE ALIGNED WITH STEPS.
8. TOP SLAB SHALL FIT TIGHTLY TO INLET. GAPS <3" SHALL BE GROUTED. GAPS 3" TO 5" SHALL BE BLOCKED AND GROUTED. GAPS >5" SHALL BE DOWELED, FORMED, POURED TO EXTEND.
9. ALL PRECAST SHALL HAVE A MINIMUM THICKNESS OF 6".

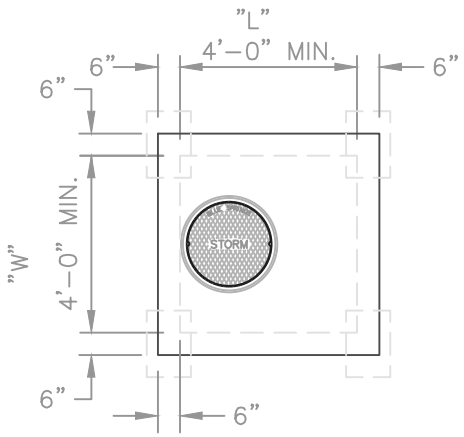
Blue Springs Missouri

STANDARD DETAILS

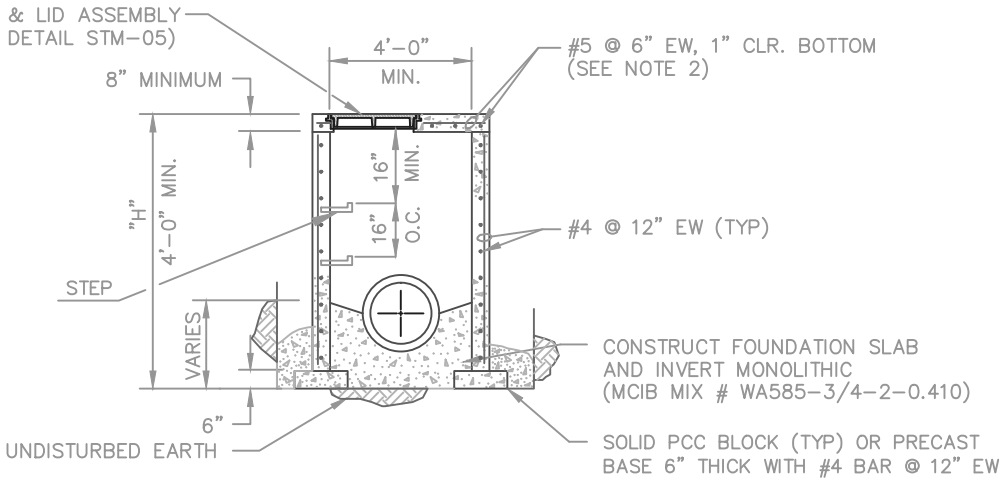
PRECAST CURB INLET

REVISIONS			
NO.	DATE	BY	REMARKS
1	01/14	BM	GENERAL UPDATE
2	04/18	TSD	GENERAL UPDATE

DRAWN BY: DW	DATE: 2-3-93
DETAIL NO.: STM-01	SCALE: NO SCALE
APPROVED BY: SPJ	



PLAN



SECTION

PRECAST JUNCTION BOX DETAIL

NOTES:
1. REMOVE LIFTING HOOKS FLUSH UPON PLACEMENT OF TOP SLAB AND GROUT AS NECESSARY TO REPAIR.
2. TOP SLAB REINFORCEMENT SHALL ALSO INCLUDE 2 #5 @ 4" DIAGONAL FOUR SIDES OF OPENING.
3. TOP SLAB SHALL BE SET TO MATCH FINISHED GROUND LINE. EXCEPTION: IF ANY PORTION OF THE TOP SLAB IS UTILIZED AS SIDEWALK, THE SLOPE SHALL MEET ADA CROSS SLOPE REQUIREMENTS (SEE DETAIL MIS-01) AND SHALL INSTALL A FOOTING (SEE MIS-02).
4. JUNCTION BOX SHALL BE BACKFILLED TO WITHIN 1' OF FINISH GRADE USING KDOT AB-3 ROCK WITHIN THE RIGHT OF WAY.
5. JUNCTION BOX LOCATION SHALL NOT CONFLICT WITH ADA RAMPS OR CURB RETURNS.
6. RING & LID SHALL BE ALIGNED WITH STEPS.
7. TOP SLAB SHALL FIT TIGHTLY TO INLET. GAPS <3" SHALL BE GROUTED. GAPS 3" TO 5" SHALL BE BLOCKED AND GROUTED. GAPS >5" SHALL BE DOWELED, FORMED, POURED TO EXTEND.
8. PRECAST WALLS SHALL HAVE A MINIMUM THICKNESS OF 6" AND THE TOP SLAB SHALL HAVE A MINIMUM THICKNESS OF 8".

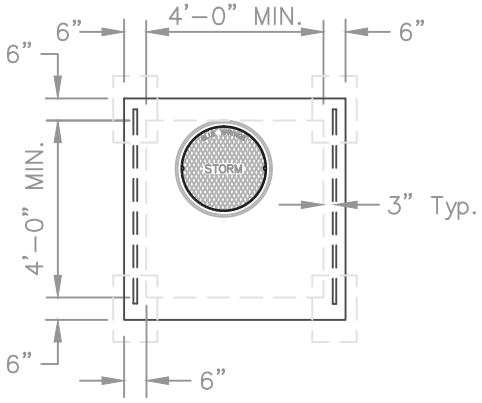
Blue Springs Missouri

STANDARD DETAILS

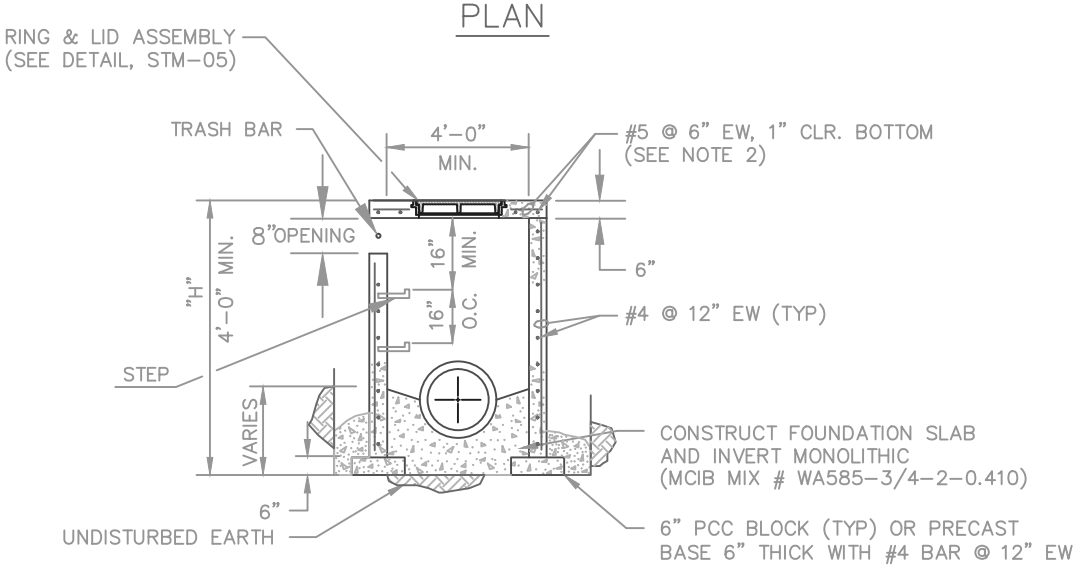
PRECAST JUNCTION BOX

REVISIONS			
NO.	DATE	BY	REMARKS
1	01/14	BM	GENERAL UPDATE
2	04/18	TSD	GENERAL UPDATE

DRAWN BY:	SPJ	DATE:	2-11-93
DETAIL NO.:	STM-02	SCALE:	NO SCALE
APPROVED BY:			



PLAN



SECTION

PRECAST STANDARD AREA INLET DETAIL

NOTES:
1. REMOVE LIFTING HOOKS FLUSH UPON PLACEMENT OF TOP SLAB AND GROUT AS NECESSARY TO REPAIR.
2. TOP SLAB REINFORCEMENT SHALL ALSO INCLUDE 2 #5 @ 4" DIAGONAL FOUR SIDES OF OPENING.
3. TOP SLAB SHALL BE SET TO MATCH FINISHED GROUND LINE. EXCEPTION: IF ANY PORTION OF THE TOP SLAB IS UTILIZED AS SIDEWALK, THE SLOPE SHALL MEET ADA CROSS SLOPE REQUIREMENTS (SEE DETAIL MIS-01).
4. INLET SHALL BE BACKFILLED TO WITHIN 1' OF FINISH GRADE USING KDOT AB-3 ROCK WITHIN THE RIGHT OF WAY.
5. JUNCTION BOX LOCATION SHALL NOT CONFLICT WITH ADA RAMPS OR CURB RETURNS.
6. RING & LID SHALL BE ALIGNED WITH STEPS.
7. TOP SLAB SHALL FIT TIGHTLY TO INLET. GAPS <3" SHALL BE GROUTED. GAPS 3" TO 5" SHALL BE BLOCKED AND GROUTED. GAPS >5" SHALL BE DOWELED, FORMED, POURED TO EXTEND.
8. ALL PRECAST SHALL HAVE A MINIMUM THICKNESS OF 6".
9. TRASH BAR(S) SHALL BE 1" DIAMETER GALVINIZED ROD CENTERED IN EACH OPENING.
10. ENGINEER SHALL CLEARLY INDICATE FIELD OPENING LOCATION(S) ON THE PLANS AND CONTRACTOR SHALL ORIENT OPENING(S) AS SHOWN ON THE APPROVED PLANS.

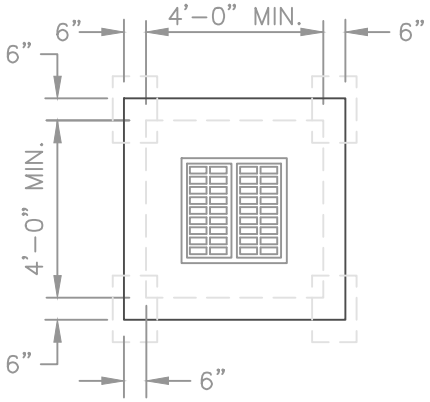
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STANDARD DETAILS

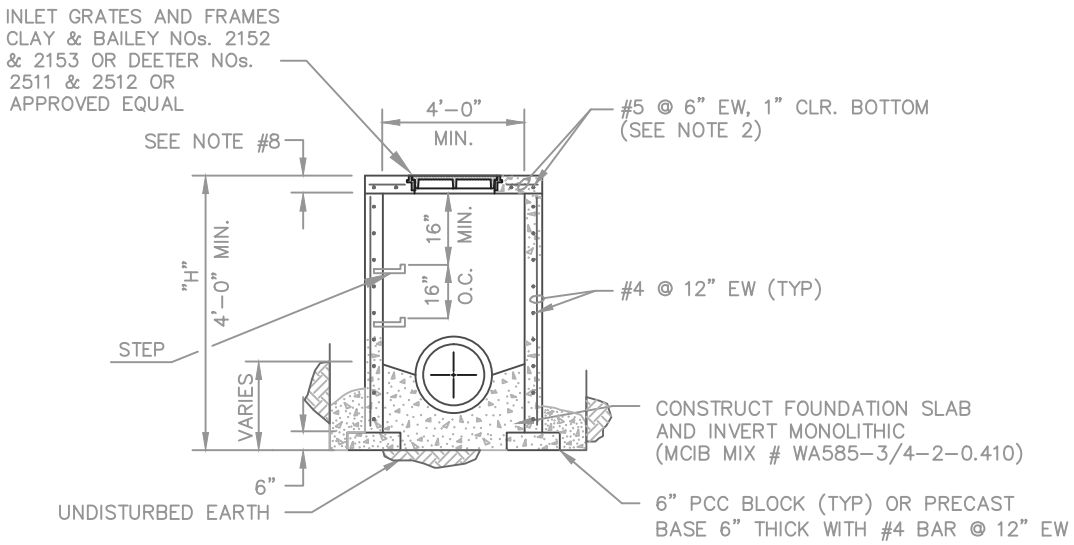
PRECAST STANDARD AREA INLET

REVISIONS			
NO.	DATE	BY	REMARKS
1	01/14	BM	GENERAL UPDATE
2	04/18	TSD	GENERAL UPDATE

DRAWN BY: JOS	DATE: 2-12-93
DETAIL NO.: STM-03	SCALE: NO SCALE
APPROVED BY:	



PLAN



SECTION

PRECAST STANDARD GRATE INLET DETAIL

NOTES:
1. REMOVE LIFTING HOOKS FLUSH UPON PLACEMENT OF TOP SLAB AND GROUT AS NECESSARY TO REPAIR.
2. TOP SLAB REINFORCEMENT SHALL ALSO INCLUDE 2 #5 @ 4" DIAGONAL FOUR SIDES OF OPENING.
3. TOP SLAB SHALL BE SET TO MATCH FINISHED GROUND LINE. EXCEPTION: IF ANY PORTION OF THE TOP SLAB IS UTILIZED AS SIDEWALK, THE SLOPE SHALL MEET ADA CROSS SLOPE REQUIREMENTS (SEE DETAIL MIS-01).
4. INLET SHALL BE BACKFILLED TO WITHIN 1' OF FINISH GRADE USING KDOT AB-3 ROCK WITHIN THE RIGHT OF WAY.
5. GRATE INLET LOCATION SHALL NOT CONFLICT WITH ADA RAMPS OR CURB RETURNS.
6. NO RISERS ALLOWED. TOP SLAB MUST BE ADJUSTED TO MATCH FINISH GRADE.
7. TOP SLAB SHALL FIT TIGHTLY TO INLET. GAPS <3" SHALL BE GROUTED. GAPS 3" TO 5" SHALL BE BLOCKED AND GROUTED. GAPS >5" SHALL BE DOWELED, FORMED, POURED TO EXTEND.
8. ALL PRECAST SHALL HAVE A MINIMUM THICKNESS OF 6". EXCEPTION: TOP SLAB SHALL BE 8" THICK IN AREAS WITH VEHICULAR TRAFFIC.
9. WHEN INSTALLED IN PAVED AREAS, ALL GRATES MUST BE APPROVED FOR BICYCLE TRAFFIC AND ORIENTED PROPERLY PER MANUFACTURERS SPECIFICATIONS.

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STANDARD DETAILS

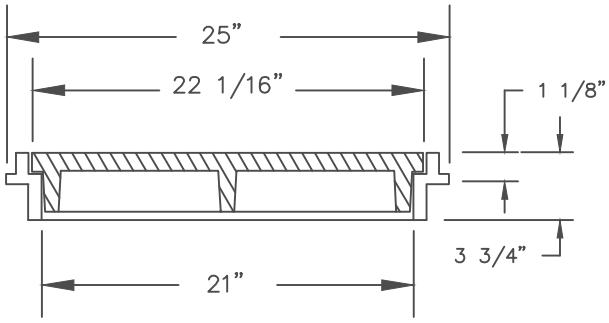
PRECAST STANDARD GRATE INLET

REVISIONS			
NO.	DATE	BY	REMARKS
1	01/14	BM	GENERAL UPDATE
2	04/18	TSD	GENERAL UPDATE

DRAWN BY:	JOS	DATE:	2-12-93
DETAIL NO.:	STM-04	SCALE:	NO SCALE
APPROVED BY:			



APPROVED RING AND LID	
CLAY & BAILEY	2020
DEETER	2016
NEENAH	R–1537
GCI	SM 2100
EJ	1501A



NOTES: 1. MINIMUM LID WEIGHT IS 140 POUNDS.
2. ALL LETTERING ON THE LID FACE IS ONE INCH TALL.

STORM SEWER RING AND LID DETAIL

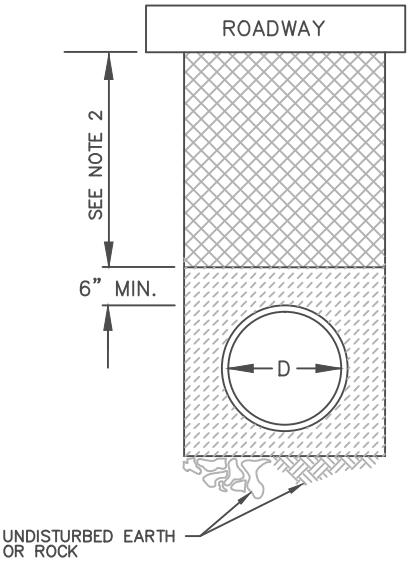
Blue Springs Missouri

STANDARD DETAILS

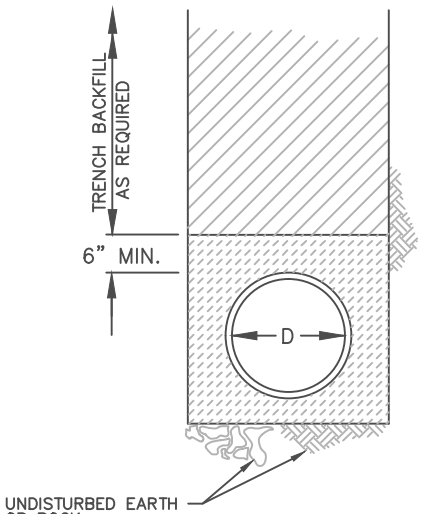
STORM SEWER RING & LID

REVISIONS			
NO.	DATE	BY	REMARKS
1	04/14	CAY	GENERAL UPDATE
2	04/18	TSD	GENERAL UPDATE

DRAWN BY:	SPJ	DATE:	2–11–93
DETAIL NO.:	STM–05	SCALE:	NO SCALE
APPROVED BY:			



STORM SEWER EMBEDMENT BENEATH ROADWAY



RCP & HDPE PIPE EMBEDMENT

LEGEND	
D	NOMINAL PIPE DIAMETER
	TRENCH BACKFILL
	TAMPED GRANULAR BACKFILL (KDOT AB-3)
	GRANULAR BEDDING

MINIMUM PIPE CLEARANCES (IN)		
D	PIPE SIDE CLEARANCE[2] (SOIL/ROCK)	PIPE BOTTOM CLEARANCE (SOIL/ROCK)
0"-27"	6/6	4/6
30"-60"	8/9	6/9
66"-UP	12/12	8/12

STORM SEWER BEDDING MATERIAL GRADATION LIMITS (% PASSING)			
SIEVE SIZE	3/4"	1/2"	3/8"
1"	100		
3/4"	90-100	100	
1/2"		80-100	
3/8"	20-55	40-77	100
NO. 4	0-10	0-15	30-40
NO. 8	0-5	0-5	0-4

NOTES:
1. GRANULAR BEDDING SHALL MEET THE GRADATION REQUIREMENTS ON THE TABLE ABOVE. MATERIAL TO BE PLACED IN NOT MORE THAN 6" LAYERS AND COMPACTED BY SLICING WITH A SHOVEL OR BY VIBRATING.
2. TAMPED GRANULAR BACKFILL (KDOT AB-3) THIS MATERIAL SHALL BE USED FOR ALL EXISTING AND PROPOSED STREET CROSSINGS.
3. TRENCH BACKFILL SHALL BE FINELY DIVIDED MATERIAL FREE FROM DEBRIS AND STONES, COMPACTED TO 95% MAXIMUM DENSITY.

STORM SEWER EMBEDMENT DETAIL

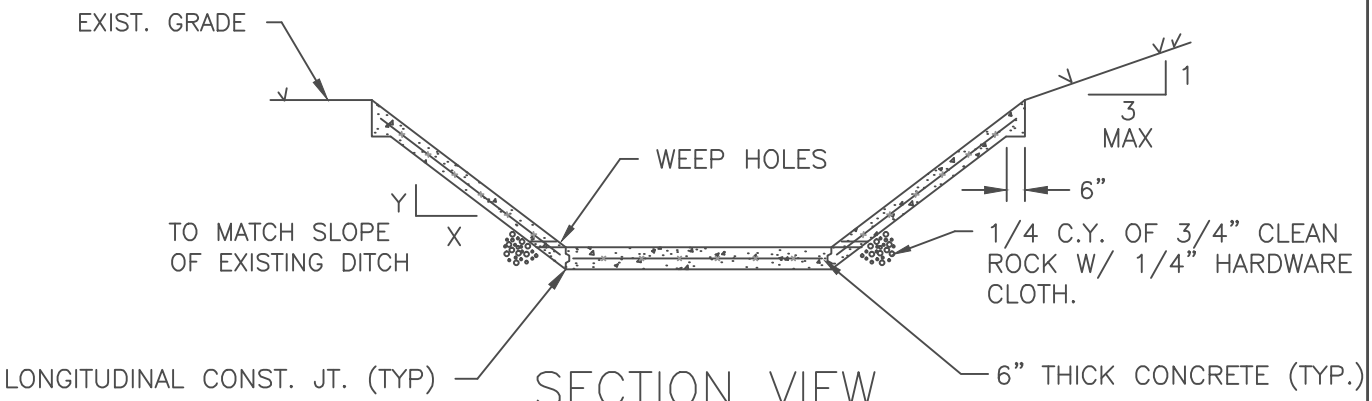
Blue Springs Missouri

STANDARD DETAILS

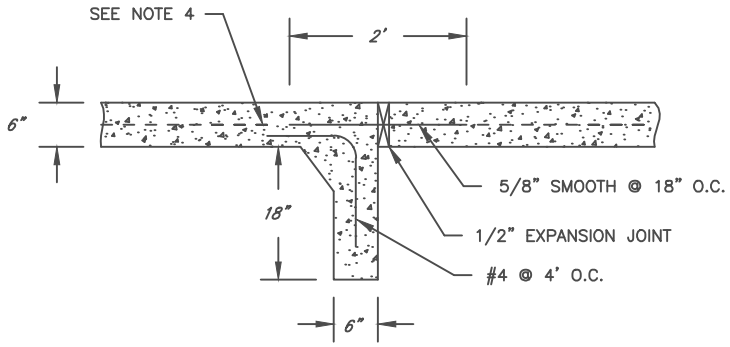
STORM SEWER EMBEDMENT

REVISIONS			
NO.	DATE	BY	REMARKS
1	01/14	BM	GENERAL UPDATE
2	04/18	TSD	GENERAL UPDATE

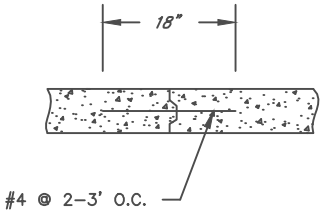
DRAWN BY:	SPJ	DATE:	2-11-93
DETAIL NO.:	STM-06	SCALE:	NO SCALE
APPROVED BY:			



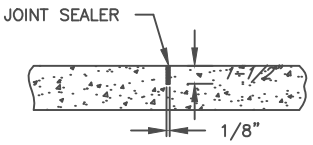
SECTION VIEW



EXPANSION JOINT



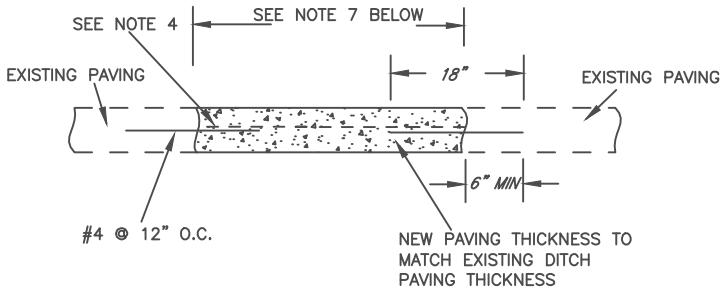
LONGITUDINAL CONST. JT.



CONTRACTION JOINT



TRANSVERSE CONST. JT.



DITCH REPAIR DETAIL

JOINT DETAILS

NOTES:

1. EXPANSION JOINTS SHALL BE PLACED WHERE DITCH LINER ABUTS ANOTHER STRUCTURE, AT 250' CTRS. MAXIMUM AND AT POINTS OF CURVATURE.
2. TRANSVERSE CONTRACTION JOINTS SHALL BE PLACED AT 15' INTERVALS. IF A POUR IS DELAYED OVER 30 MIN. A TRANSVERSE CONSTRUCTION JOINT SHALL BE SUBSTITUTED FOR A CONTRACTION JOINT AND EXCESS CONCRETE WASTED.
3. DITCH LINER CONSTRUCTION TO BE AS REQUIRED TO MATCH EXISTING DITCH THICKNESS
4. CONCRETE REINFORCEMENT TO BE 6"X6"-W3XW3 WELDED WIRE MESH.
5. 2" DIA. PLASTIC WEEP HOLES @ 30' CTRS. TO BE INSTALLED ON EACH SIDE OF DITCH LINING.
6. LONGITUDINAL CONTRACTION JOINTS SHALL BE PLACED AS SHOWN BUT NOT TO EXCEED 10' SPACING.
7. REMOVE DITCH TO NEAREST JOINT LINE AND RESTORE.

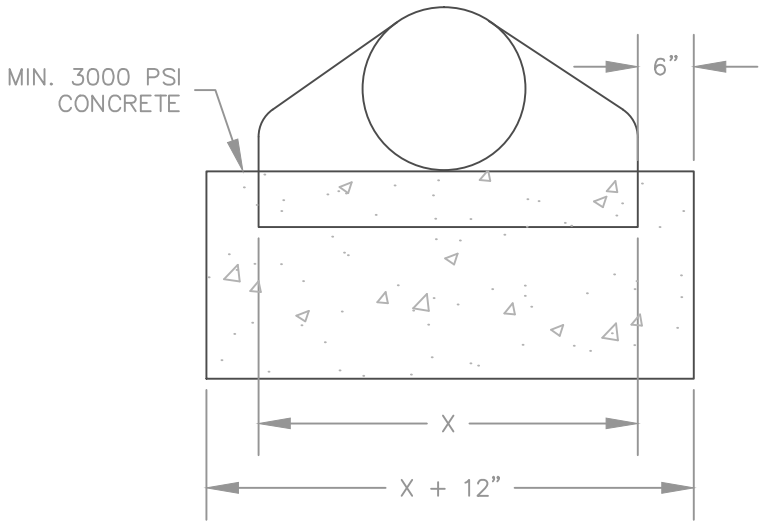
Blue Springs Missouri

STANDARD DETAILS

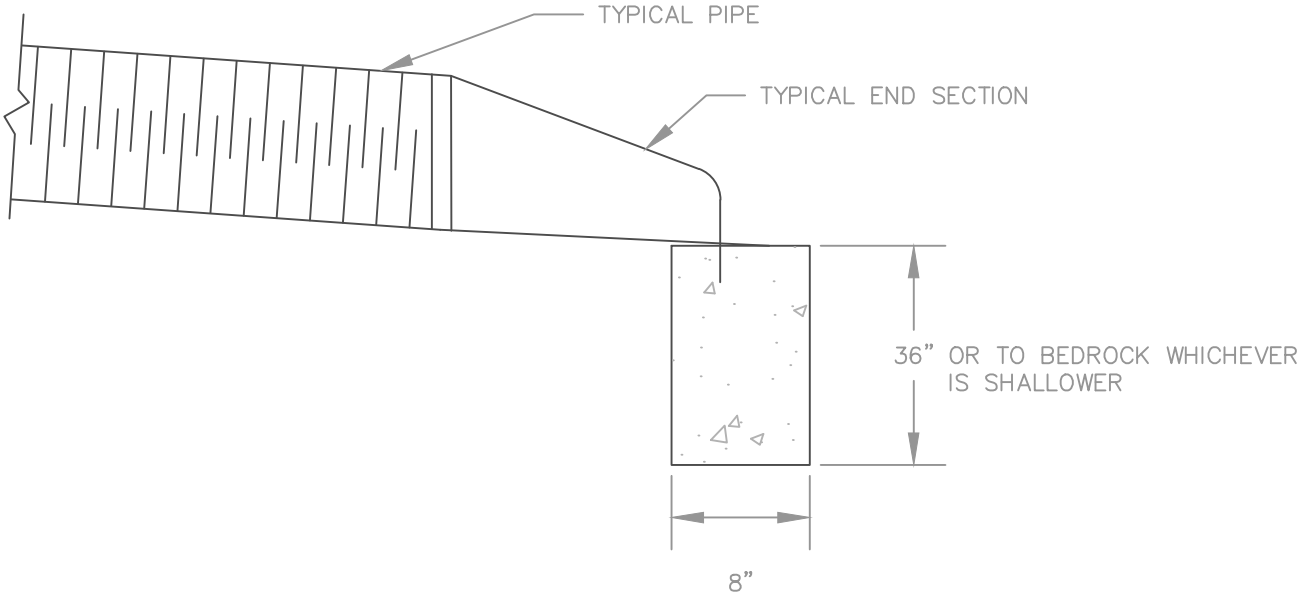
CONCRETE PAVED DITCH

REVISIONS			
NO.	DATE	BY	REMARKS
1	04/06	CAY	GENERAL UPDATE

DRAWN BY:	JOS	DATE:	2-12-93
DETAIL NO.:	STM-07	SCALE:	NO SCALE
APPROVED BY:			



END VIEW



PLAN VIEW

TYPICAL TOE WALL DETAIL

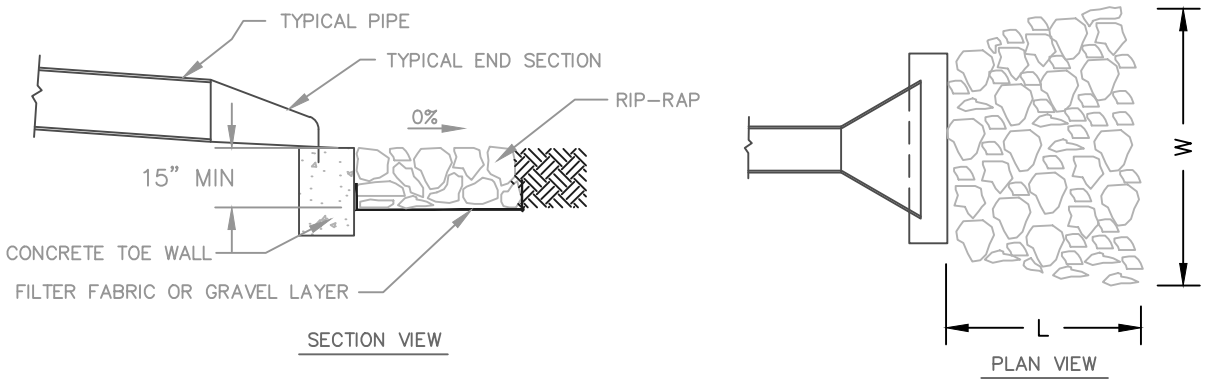
Blue Springs Missouri

STANDARD DETAILS

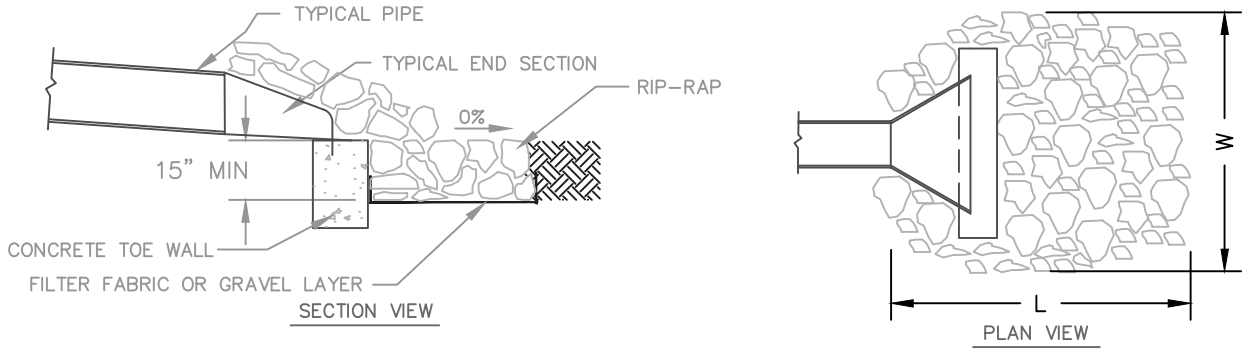
TYPICAL TOE WALL

REVISIONS			
NO.	DATE	BY	REMARKS

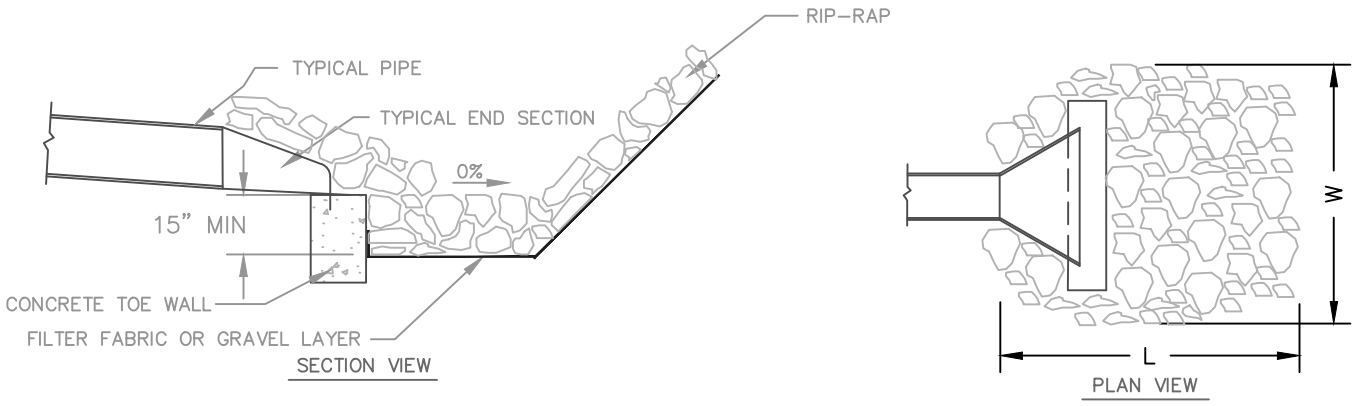
DRAWN BY: PWC	DATE: 09/29/98
DETAIL NO.: STM-08	SCALE: NO SCALE
APPROVED BY:	



PIPE OUTLET TO FLAT AREA WITH NO DEFINED CHANNEL



PIPE OUTLET LINEAL TO A WELL DEFINED CHANNEL



PIPE OUTLET PERPENDICULAR TO A WELL DEFINED CHANNEL

NOTES:
1. L & W AS DETERMINED BY ENGINEER.
2. ALL RIP-RAP SHALL BE GROUTED.
3. ALL RIP-RAP SHALL BE SIZED BY AN ENGINEER.

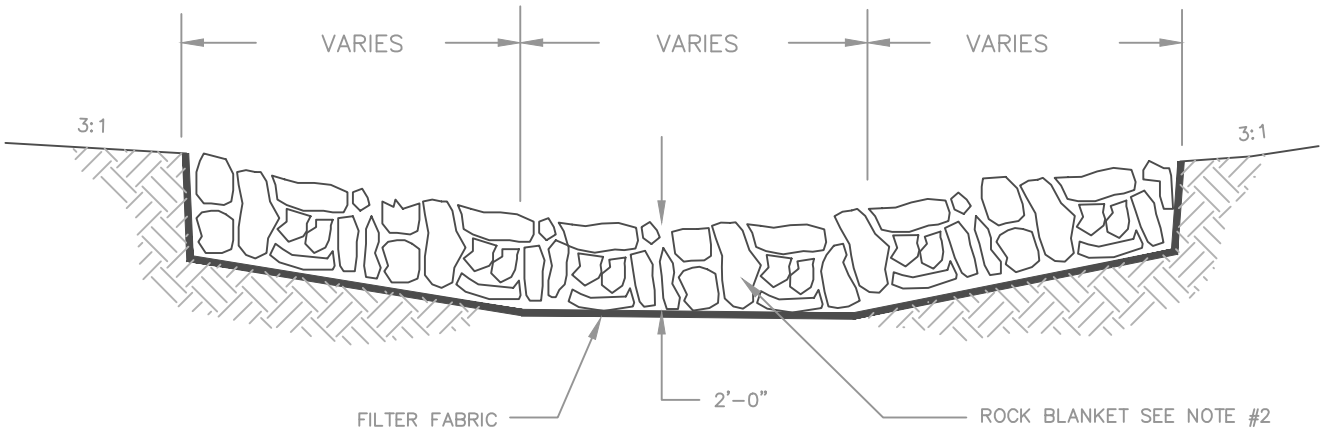
Blue Springs Missouri

STANDARD DETAILS

PIPE OUTLET RIP-RAP

REVISIONS			
NO.	DATE	BY	REMARKS
1	04/06	CAY	GENERAL UPDATE
2	01/14	BM	GENERAL UPDATE

DRAWN BY: PWC	DATE: 03/08/99
DETAIL NO.: STM-09	SCALE: NO SCALE
APPROVED BY:	



NOTES: 1. LENGTH AND WIDTH AS DETERMINED BY ENGINEER.
2. ALL RIP-RAP SHALL BE SIZED BY AN ENGINEER.
3. ALL RIP-RAP SHALL BE GROUTED.

RIP-RAP DITCH - TYPICAL SECTION

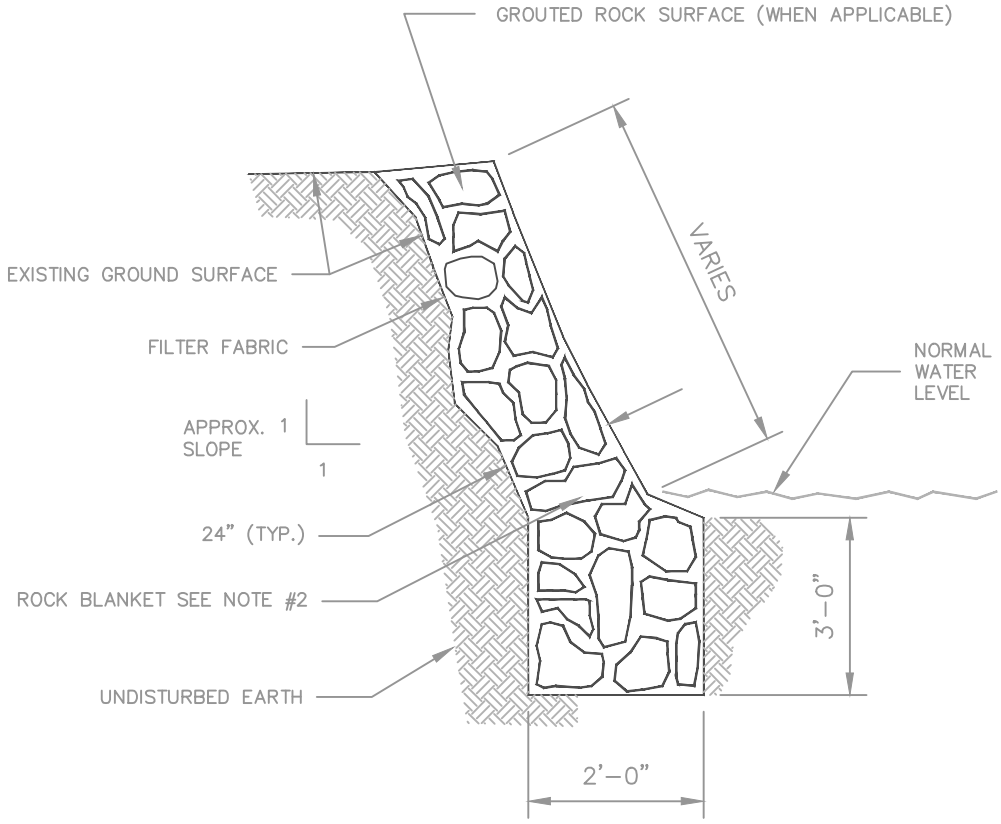
Blue Springs Missouri

STANDARD DETAILS

TYPICAL RIP-RAP DITCH

REVISIONS			
NO.	DATE	BY	REMARKS
1	01/14	BM	GENERAL UPDATE
2	04/18	TSD	GENERAL UPDATE

DRAWN BY:	PWC	DATE:	10/02/98
DETAIL NO.:	STM-10	SCALE:	NO SCALE
APPROVED BY:			



NOTES: 1. LENGTH AND WIDTH AS DETERMINED BY ENGINEER.
2. ALL RIP-RAP SHALL BE SIZED BY AN ENGINEER.

CREEK BANK STABILIZATION DETAIL

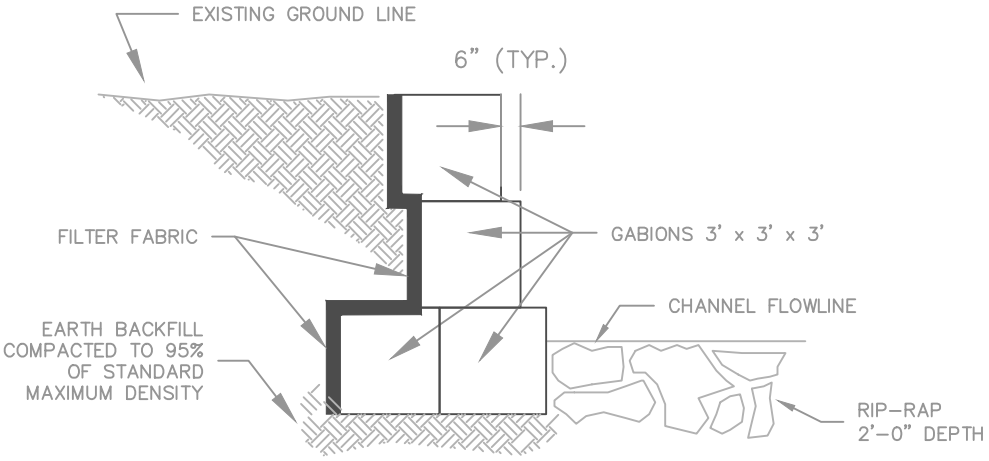
Blue Springs Missouri

STANDARD DETAILS

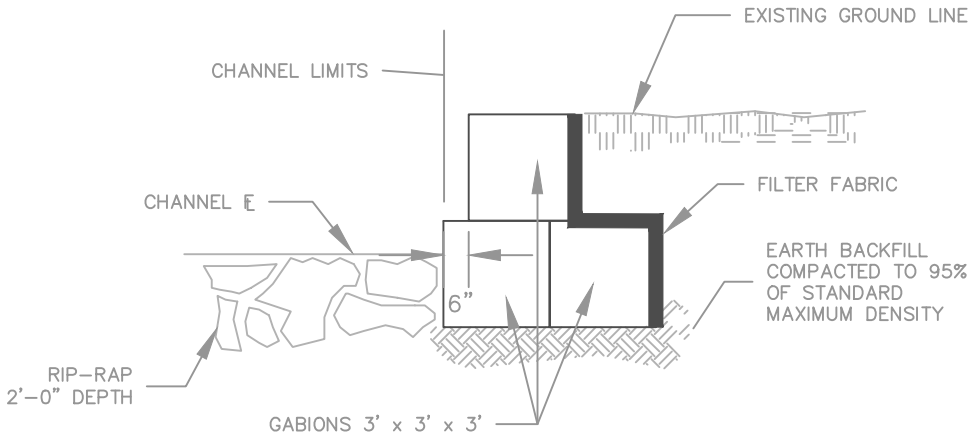
CREEK BANK STABILIZATION

REVISIONS			
NO.	DATE	BY	REMARKS
1	01/14	BM	GENERAL UPDATE
2	04/18	TSD	GENERAL UPDATE

DRAWN BY:	PWC	DATE:	09-22-98
DETAIL NO.:	STM-11	SCALE:	NO SCALE
APPROVED BY:			



TYPE 1 GABION PLACEMENT



NOTE: SHALL BE DESIGNED BY AN ENGINEER.

TYPE 2 GABION PLACEMENT

Blue Springs Missouri

STANDARD DETAILS

GABION PLACEMENT

REVISIONS			
NO.	DATE	BY	REMARKS
1	01/14	BM	GENERAL UPDATE

DRAWN BY: PWC	DATE: 09/15/98
DETAIL NO.: STM-12	SCALE: NO SCALE
APPROVED BY:	