Appendix Q
Hydrology Data

Inglewood Basketball and Entertainment Center Low Impact Development (LID) Report

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WILSON MEANY

D & D ENGINEERING, INC.

INGLEWOOD BASKETBALL AND ENTERTAIMENT CENTER

LOW IMPACT DEVELOPMENT (LID) REPORT

May 2, 2019

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CITY OF INGLEWOOD INC. CALIFORNIA 1908

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I. Introduction

The purpose of this report is to outline and describe the proposed Low Impact Development (LID) strategies and Best Management Practices (BMPs) necessary to adequately reduce the hydrological and environmental impact of developing the proposed Inglewood Basketball and Entertainment Center (IBEC) project, to comply with the requirements of LID Ordinance and LID Standard Manual[1]. Additionally, this report will determine the storm water quality design volume (SWQDv) calculated from the 85th percentile, 24-hour rain event that is required to be treated. Finally, this report will also discuss the methodology used to arrive at these conclusions, the infrastructure necessary to support it and the operations and maintenance procedures required to maintain the system effective over time.

II. Project Description

The Inglewood Basketball and Entertainment Center (IBEC) Project is comprised of three sites located near the intersection of Century Boulevard and Prairie Avenue in the city of Inglewood. The first and main project site is located to the southeast of the intersection the second parcel is located to the southwest of the intersection, and the third piece is southeast of Century and Doty intersection. The first site of the proposed development includes a multi-purpose sport arena, a parking structure and other miscellaneous-use buildings. The site is located on an approximately 17-acre site bound by Century Blvd. on the North, Prairie Avenue on the West, Doty Avenue on the East and 103th Street on the South. The second site includes proposed parking structure over an approximately 5.5-acre parcel, not contiguous to the main project site, just west of Prairie Avenue. The third site includes a proposed parking structure and a hotel over an approximately 5-acre parcel, not contiguous to the main project site, just east of Doty Avenue. Refer to the project site map, *Figure 1 — Vicinity Map,* for project site locations.

The IBEC project is a mixed-use project that includes a multi-purpose sport arena with auxiliary structures including retail, office buildings, restaurants, hotel, parking structures and plaza areas. The project consists of 71,000 sq. ft. of office space, 48,000 sq. ft. of retail and food service space, 85,000 sq. ft. of practice facilities, 25,000 sq. ft. of Sports Medicine Clinic. 15,000 sq. ft. of Community Space, an 18,000-fixed seat arena with an additional 500 temporary seats, a parking structure and substantial surface parking.

a. Existing Conditions

The existing site over the proposed main project site currently contains commercial buildings, a hotel, a fast-food restaurant and significant portions of vacant land. The existing site over the proposed parking structure, surface parking and a hotel consists of five parcels that are currently all vacant. The existing site over the proposed parking structure west of Prairie Avenue site consists of thirty parcels that are currently all vacant.

Preliminary geotechnical investigations indicate that infiltration is infeasible for the site. The native soil characteristics are generally draining poorly and mostly heavily clayey or silty with an infiltration rate less than the LA County minimum for infiltration of 0.3 in/hr. Refer to the geotechnical report and recommendations, *Appendix A – Excerpt from Geotechnical Report,* for a summary of geotechnical findings.

b. Proposed Conditions

The proposed project seeks to develop the site into a mixed-use development composed of three general sites. The main site is considered the event area and includes a multi-purpose sports arena, retail/commercial buildings, a parking structure, and outdoor plaza. The east site proposes a hotel and parking structure, while the west site

[1] (County of Los Angeles Department of Public Works, 2014)

proposes a parking structure. Due to these improvements, it is estimated that approximately 90% of the project site will be covered by impervious surfaces.

III. Low Impact Development (LID) Stormwater Quality Control Measures

The Low Impact Development (LID) plan is intended to mitigate the hydrological and environmental stresses imposed on the site due to its proposed development. As the site's development typically increases impervious level, so does the stormwater runoff volume and the amount of environmental pollutant it produces. The goal of the LID plan is to mitigate these factors by both reducing the volume of stormwater and potential pollutants in stormwater runoff to the most reasonable extent possible. This strategy may be accomplished by implementing a variety of Best Management Practices (BMPs) stormwater quality control measures designed to handle the frequent, smaller storm event, or the initial volume of stormwater run-off from a larger storm event (referred as first flush). This study will focus on and follow the procedures for selecting and implementing stormwater quality measures, as recommended in the Los Angeles County Department of Public Works (LACDPW) Low Impact Development Standards Manual.

a. Los Angeles County Design Guidelines

The focus of the design criteria for stormwater control measures is the construction and implementation of stormwater quality control measures that meet stormwater runoff requirements in terms of on-site retention and pollutant removal. The project must design and implement stormwater quality control measures that can handle the SWQDv. Any surplus storm run-off must be diverted around the stormwater quality control measures to prevent overloading. The Los Angeles County Department of Public Works Low Impact Development Standards Manual categorized stormwater control quality measures into the following types listed in level of priority:

1. Retention based BMPs (bioretention, infiltration basin, drywells, capture and reuse cisterns, green roof)
2. Biofiltration BMPs (biofiltration)
3. Vegetation-based BMPs (stormwater planters, vegetated swales, tree-well filter, etc.)
4. Treatment-based BMPs (Extended detention basin, constructed wetlands, wet pond, sand filters, proprietary devices)

Systems in a lower priority level may only be used if higher priority measures are deemed to be technically infeasible as set forth in the county's standards manual. Due to the properties of the native soils and the tendency to percolate well, this study will focus on retention-based BMPs.

b. Proposed Low Impact Development (LID) System

The proposed Low Impact Development (LID) system will utilize a combination of county standard bio-filtration and/or stormwater planters to treat the SWQDv from the 85th percentile, 24-hour storm. This will be accomplished through directing runoff from drainage areas to onsite bio-filtration and stormwater planters currently proposed as part of the site hydrology study.

The proposed bio-filtration systems are designed to capture site runoff from roof drains and/or surface flow, treat the runoff through biological reactions within the planter soil media, and discharge at a rate intended to mimic pre-developed conditions. Refer to the specific system configurations, *Figure 3 – Site Specific Bio-Filtration Details*, for bio-filtration system configurations at their given locations. Sizing and capacity analysis of the proposed conventional bio-filtration systems will be calculated by following the design guidelines defined through the State of California Los Angeles Regional Water Quality Control Board. It is anticipated that the city of Inglewood will apply directly to the water board for approval. Once approval is granted to the city of Inglewood, only city approval is required for continuation.

IV. Hydromodification Analysis

As outlined in Section 8.2 of the Los Angeles County Department of Public Works Low Impact Development Standards Manual, projects may be exempt from implementation of hydromodification control measures where assessments

of downstream channel conditions and proposed discharge hydrology indicate that adverse hydromodification effects to beneficial uses of natural drainage systems are unlikely. Since the proposed project site will discharge through a storm drain system into the concrete Dominguez Channel, the project is exempt from Hydromodification Control Measures.

V. Site Design BMPs

a. Site Design

Current water quality requirements are based on treating a specific volume of stormwater run-off from the project site (SWQDv). The design storm from which the SWQDv is calculated is defined as the greater of:

- The 0.75-inch, 24-hour rain event, or
- The 85th percentile, 24-hour rain event as determine by the Los Angeles County 85th percentile precipitation isohyetal map

The volume of stormwater run-off that must be retained at a project site is calculated using MODRAT. In this case, the SWQDv volume from the 85th percentile, 24-hour rain event will be utilized. LACDPW developed a hydrologic calculator (HydroCalc) that completes the full MODRAT calculation process and produce the SWQDv volumes and flow rates for single subareas. This report will utilize the results from HydroCalc as a means of determining the stormwater quality design volumes (SWQDv). The proposed site was divided into drainage sub-areas, based on the proposed site grading and proposed drainage patterns. Refer to the Conceptual Low Impact Development Exhibit, *Figure 2 – Conceptual Low Impact Development (LID) Exhibit*, for the definition of the drainage sub areas. The following table, Table 1 - Post-Development Conditions, summarizes the results of the study and required treating volumes SWQDv for each subarea.

TABLE 1 - POST-DEVELOPMENT CONDITIONS AND BMP SUFFICIENCY SUMMARY

Inglewood Basketball and Entertainment Center

Drainage Subarea				**BMP Sufficiency Summary**			
	Area (sf)	**Q_{pm} (cfs)**	**SWQDv x 1.5 (cf)**	**Bio-Filtration System**	**Required (sf)**	**Provided (sf)**	**Sufficient**
A	55,094	0.3687	6,251	Biofiltration/ Stormwater Planter	2,500	2,600	Yes
B	168,409	0.8625	18,122	Biofiltration/ Stormwater Planter	7,249	7,300	Yes
CD	712,655	3.8106	81,434	Biofiltration/ Stormwater Planter	32,573	33,000	Yes
E	136,207	1.0662	15,122	Biofiltration/ Stormwater Planter	6,049	6,100	Yes
F	105,106	0.8028	10,950	Biofiltration/ Stormwater Planter	4,380	4,500	Yes
Totals	***1,101,446***	**7.8659**	***120,855***				

Refer to *Appendix B – Site Design Calculations for each subarea HydroCalc worksheets*.

Refer to *Appendix C – Sizing Calculations for each Bio-Filtration System calculation.*

b. BMP Selection

All drainage areas, as listed in the table above, discharge via roof drains or surface flow to bio-filtration/stormwater planters located on the surface. Refer to the conceptual low Impact Development (LID) Exhibit, *Figure 2 – Conceptual Low Impact Development (LID) Exhibit*, for stormwater distribution.

Refer to the calculation sheets in *Appendix C – Bio-Filtration Sizing Calculations*, for detailed calculations demonstrating the capacity of each proposed bio-filtration system.

VI. Summary and Conclusion

To summarize, the proposed low impact development (LID) system stormwater quality control measures and structural source measures are adequately designed and sized to accomplish the following:

- Capture and mitigate the SQWDv volume from the 85th percentile, 24-hour storm;
- Bio-filtration of captured volume by bio-filtration through a combination of standard bio-filtration and stormwater planters
- Prevent pollutants from contacting stormwater run-off and/or prevent discharge of contaminated stormwater run-off to stormdrain system

Based on the calculations and conclusions presented in this report, the proposed LID stormwater quality control measures will retain on-site through bio-filtration and will mitigate the required SWQDv volumes as defined by the Los Angeles County Department of Public Works Low Impact Development Standards Manual.

VII. References

County of Los Angeles Department of Public Works. (2014). *Low Impact Development Standards Manual.* Los Angeles.

FIGURES

Figure 1 — Vicinity Map

Figure 2 — Conceptual Low Impact Development (LID)

Figure 3 — Site Specific Bio-Filtration Details

Figure 1

Vicinity Map

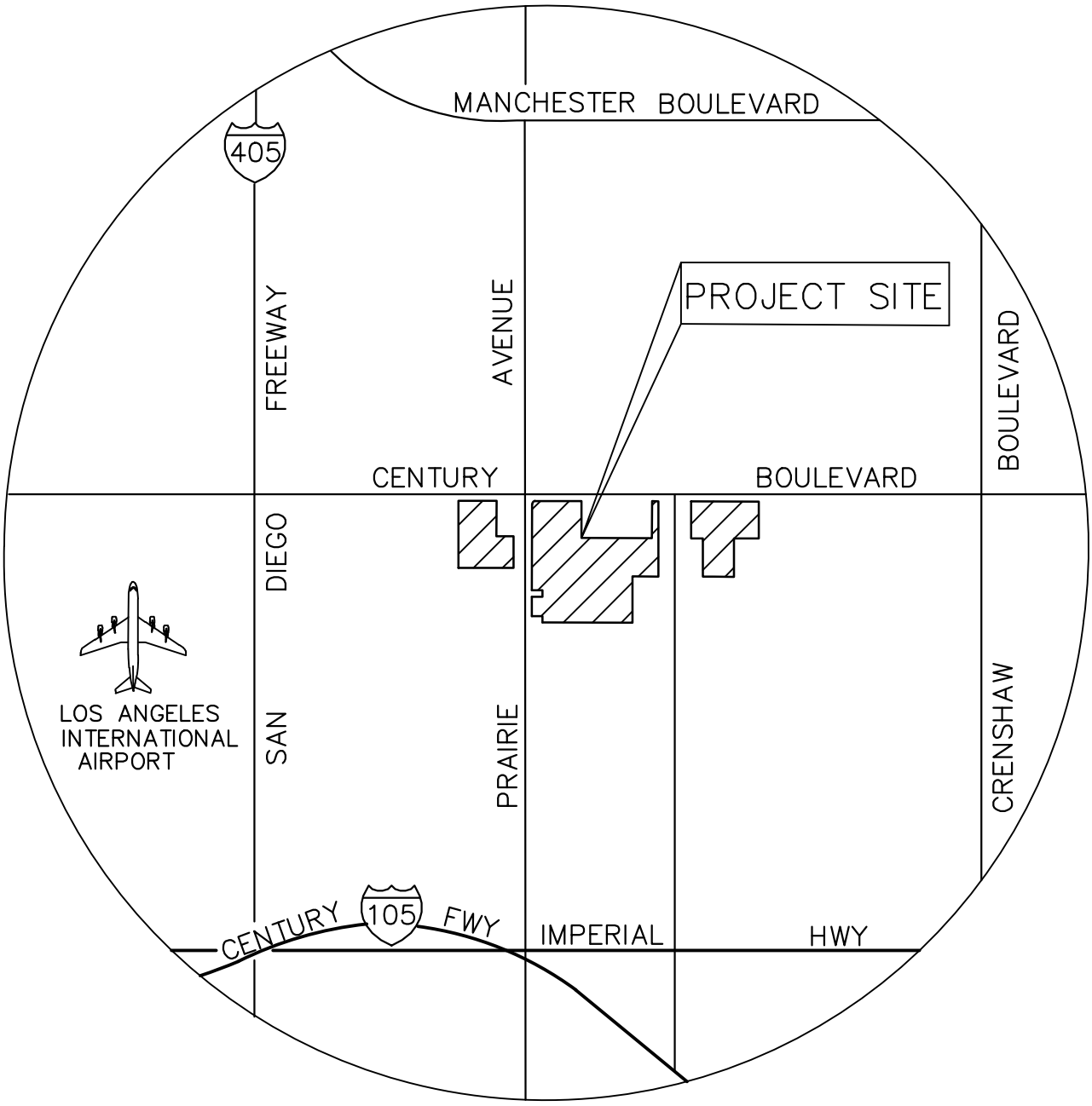

FIGURE 1

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INGLEWOOD BASKETBALL AND ENTERTAINMENT CENTER

VICINITY MAP

SCALE: AS SHOWN

DATE: 05/01/19

SHT NO.: 01 OF 01

Drawing Name: M:\17001\Eng\17001\Exhibits\08_Site Plan A Vic Map\Vicinity map.dwg
Last Opened: May 01, 2019 - 4:42pm by: Boris

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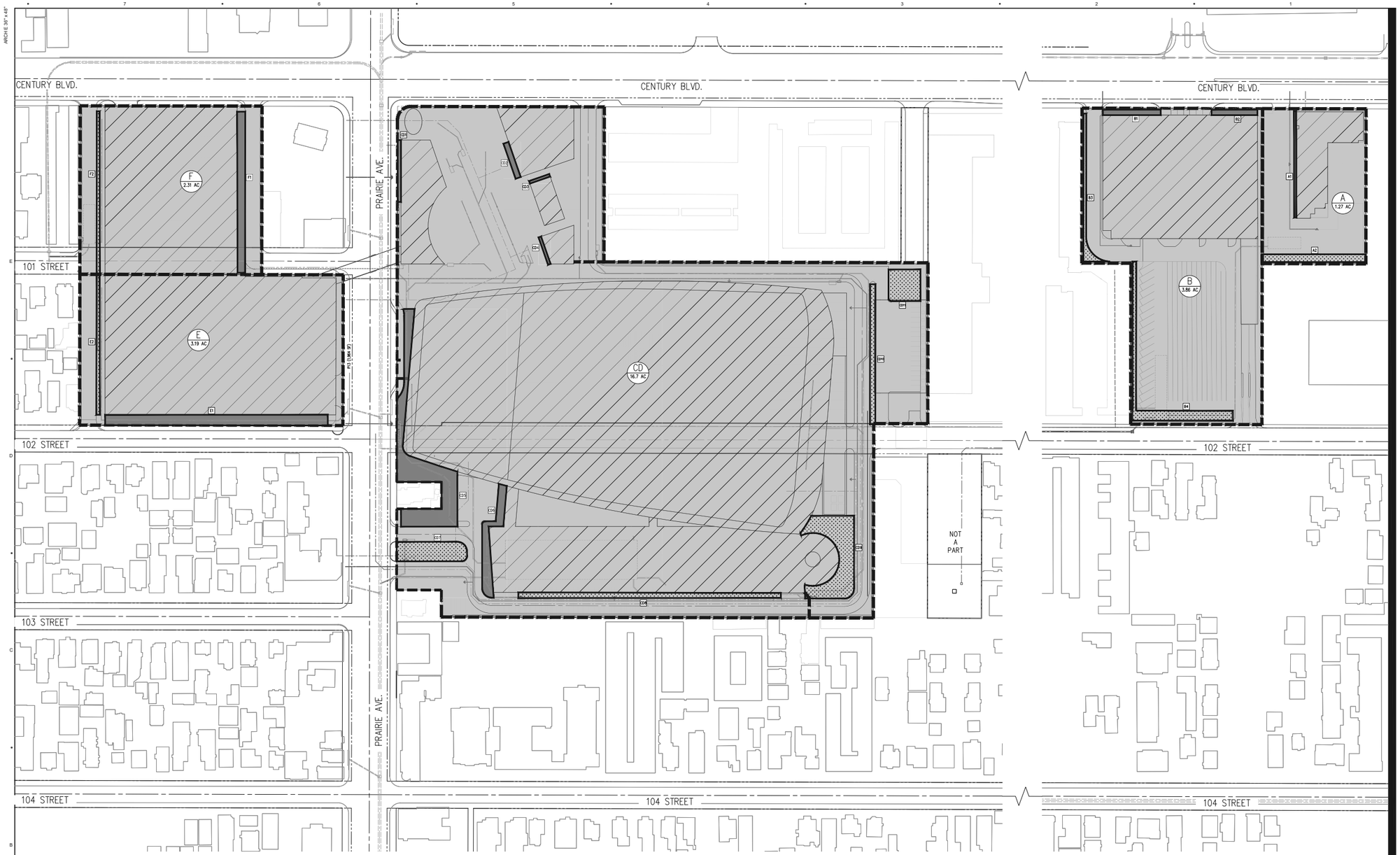
Figure 2

Conceptual Low Impact Development (LID)



LEGEND

- A / X.XX AC — SUBAREA NUMBER; AREA (AC)
- DRAINAGE SUBAREA
- ROOF AREA
- STORMWATER PLANTERS (VEG-1)
- BIOFILTRATION PLANTERS (BIO-1)
- BMP NUMBERS

LOW IMPACT DEVELOPMENT NOTES:

1. INFILTRATION DEEMED TECHNICALLY INFEASIBLE PER GEOTECHNICAL INVESTIGATIONS.
2. BIO-FILTRATION BMPs ARE SUGGESTED AS THE PROPOSED LID MEASURE PER LOS ANGELES COUNTY GUIDELINES.
3. LOCATION, FOOTPRINT AND TYPE OF BIO-FILTRATION SYSTEM SHOWN ON PLAN IS CONCEPTUAL AND FOR COORDINATION PURPOSES ONLY.

BMP SUMMARY TABLE

DRAINAGE SUBAREA	AREA (SF)	AREA (AC)	BMP TYPE PROVIDED	BMP SIZE REQUIRED	BMP SIZE PROVIDED	BMP NUMBER(S)
A	55,094	1.27	BIOFILTRATION/STORMWATER PLANTERS	2500 SF	2600 SF	A1, A2
B	168,409	3.86	BIOFILTRATION/STORMWATER PLANTERS	7249 SF	7300 SF	B1, B2, B3, B4
CD	712,655	16.7	BIOFILTRATION/STORMWATER PLANTERS	32573 SF	33000 SF	CD1 – CD11
E	136,207	3.19	BIOFILTRATION/STORMWATER PLANTERS	6049 SF	6100 SF	E1, E2
F	105,106	2.31	BIOFILTRATION/STORMWATER PLANTERS	4380 SF	4500 SF	F1, F2

60 0 60 120
scale 1" = 60' feet

TRUE NORTH

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PROJECT
IBEC,
INGLEWOOD CALIFORNIA

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REGISTRATION

NOT FOR CONSTRUCTION

ISSUE/REVISION

I/R	DATE	DESCRIPTION
	NOV 8, 2018	EIR DOCUMENTS

KEY PLAN

PROJECT NUMBER
17001-100

SHEET TITLE
Conceptual Low Impact Development (LID) Exhibit

SHEET NUMBER
C-302A

Project Management Initials:
Lead Project Engineer:

Printed on Post-Consumer Recycled Content Paper

ARCH E 30" x 42"

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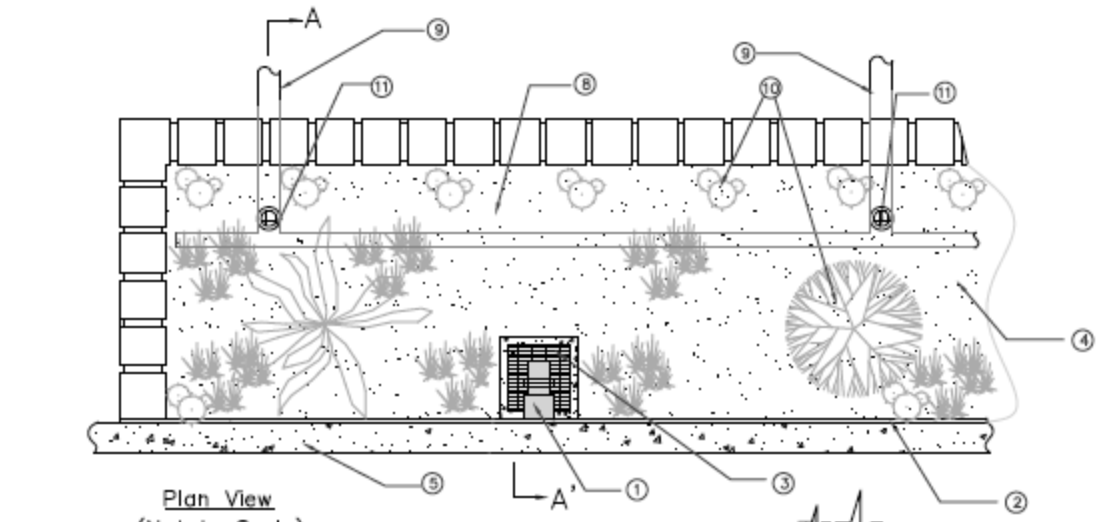
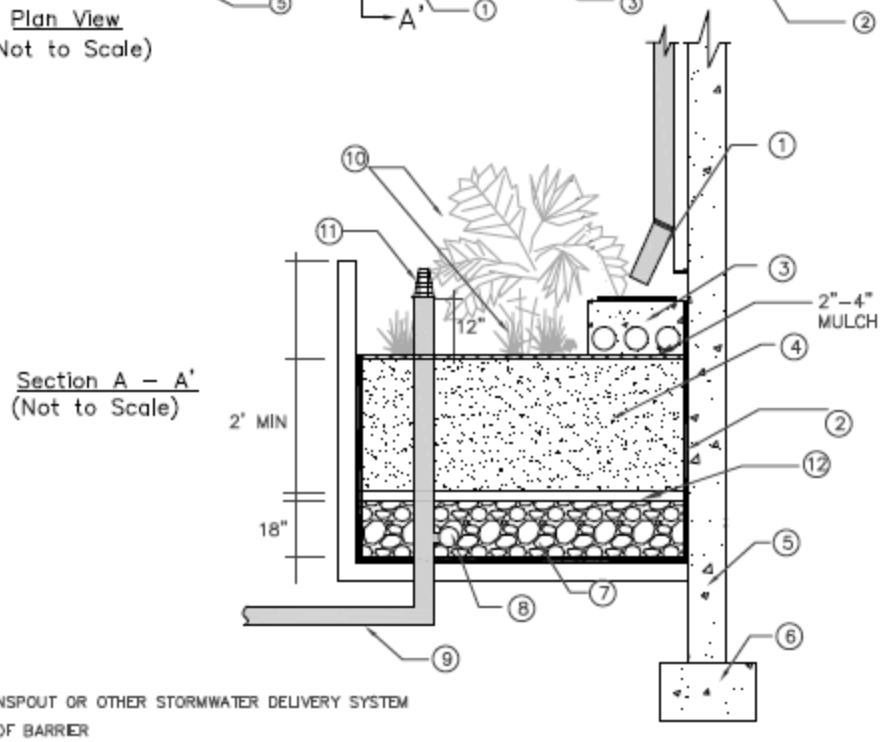
Figure 3

Site Specific Bio-Filtration Details





NOTES:

1. ROOF DOWNSPOUT OR OTHER STORMWATER DELIVERY SYSTEM
2. WATERPROOF BARRIER
3. SHALLOW ENERGY DISSIPATOR BASIN DISPERSES FLOW AT SOIL SURFACE
4. SOIL MIX (SEE PLANTING MEDIA SECTION)
5. BUILDING
6. FOUNDATION. INSTALL FOUNDATION DRAINS AS NEEDED
7. GRAVEL BEDDING (SEE UNDERDRAIN)
8. PERFORATED PIPE SHALL RUN ENTIRE LENGTH OF PLANTER
9. CONNECTION TO DOWNSTREAM CONVEYANCE SYSTEM
10. PLANTS
11. SET OVERFLOW 2" BELOW THE TOP OF THE PLANTER
12. OPTIONAL CHOKING GRAVEL LAYER

Figure E-9. Stormwater Planter Schematic

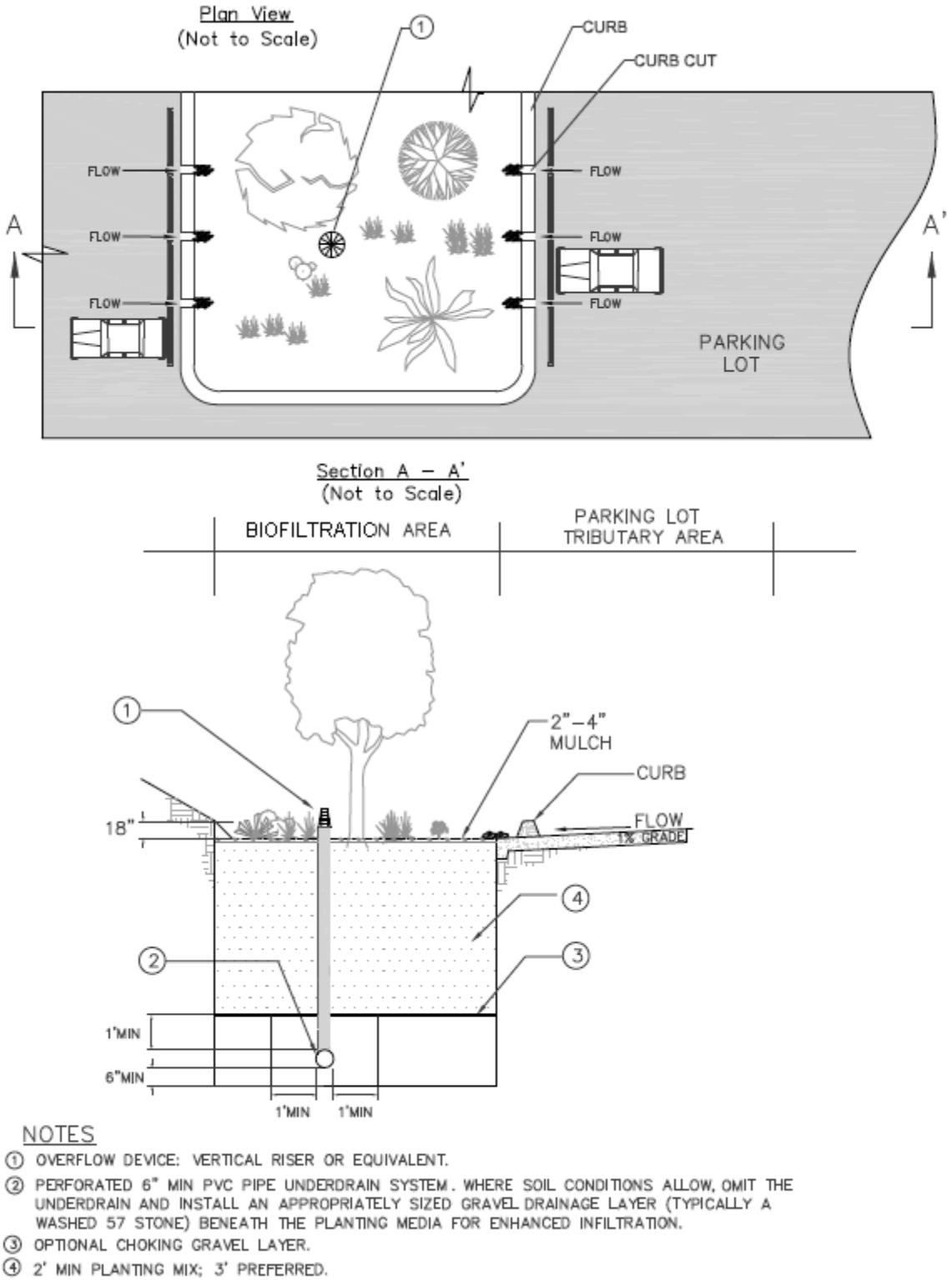


Figure E-7. Biofiltration Area Schematic

Appendix A

Excerpt from Geotechnical Report

5.11.1 Flexible Pavement Thicknesses

The following flexible pavement thicknesses for Traffic Index (TI) values of 5, 6 and 7 may be used:

Table 8 – Minimum Flexible (AC) Pavement Thicknesses

	Pavement Section (feet)	
Traffic Index (TI)	Asphaltic Concrete	Aggregate Base
4 to 5	0.3	0.55
6 to 7	0.4	0.65
7 to 8	0.5	0.75

5.11.2 Concrete Flatwork / Hardscape and Sidewalks

For PCC pavements in pedestrian areas, a pavement section of 4 inches PCC over 6 inches of aggregate base is typical for the kinds of soils to be expected at the site.

It should be noted that the above recommendations apply to parking lot, driveway and street areas only. Loading docks and trash enclosures should be paved with PCC pavement. We recommend that the section consist of a minimum of 6 inches of reinforced Portland cement concrete over 4 inches of Caltrans Class 2 Base with a minimum R-value of 78. The aggregate base should be compacted to at least 95 percent of the maximum dry density per ASTM D-1557 over unyielding subgrade.

5.12 INFILTRATION FEASIBILITY

Preliminary percolation tests were conducted at five (5) selected locations at the site (P-1 through P-5). The results of percolation testing are summarized in Appendix D.

Based on the results, infiltration rates for the soils in the upper 10 feet ranged from 0.32 to 3.52 in/hr. The test results represent a sampling of the upper materials which consist of variable and predominately clayey and silty sands. The upper value may be due to localized presence of more granular soils at the particular test location (P-2).

However, as discussed in this report, the subsurface native soils at the site consist predominately of clayey soils with estimated infiltration rates lower than 0.3 in/hr and with few or no connectivity to permeable soil horizons of adequate thickness. Moreover, the underlying, predominately clayey soils have never experienced saturation and have been found to exhibit more compressibility when inundated; therefore any infiltration of water into the subsurface soils, particularly within the areas to be occupied by permanent structures, is highly discouraged from a foundation performance stand-point. Given these constraints, infiltration practices might not be feasible at the site.

Appendix B

Post-Development Hydrological Conditions

Peak Flow Hydrologic Analysis

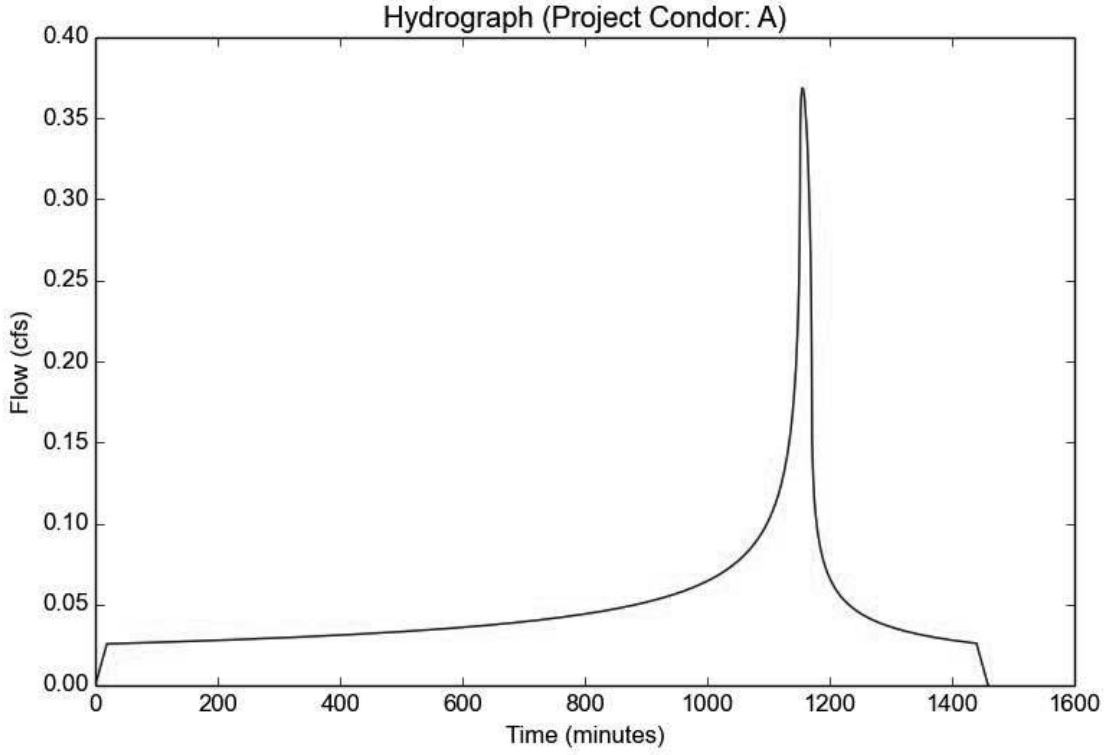
File location: M:/17001/Admin/17001-100/Reports/03_Third round fo the reports March 2019/LID/Calcs/85th Percentile Hydrocalc.pdf
Version: HydroCalc 1.0.3

Input Parameters

Project Name	Project Condor
Subarea ID	A
Area (ac)	1.27
Flow Path Length (ft)	370.0
Flow Path Slope (vft/hft)	0.01
85th Percentile Rainfall Depth (in)	1.05
Percent Impervious	0.96
Soil Type	13
Design Storm Frequency	85th percentile storm
Fire Factor	0
LID	True

Output Results

Modeled (85th percentile storm) Rainfall Depth (in)	1.05
Peak Intensity (in/hr)	0.3345
Undeveloped Runoff Coefficient (Cu)	0.1
Developed Runoff Coefficient (Cd)	0.868
Time of Concentration (min)	19.0
Clear Peak Flow Rate (cfs)	0.3687
Burned Peak Flow Rate (cfs)	0.3687
24-Hr Clear Runoff Volume (ac-ft)	0.0957
24-Hr Clear Runoff Volume (cu-ft)	4166.9399



Peak Flow Hydrologic Analysis

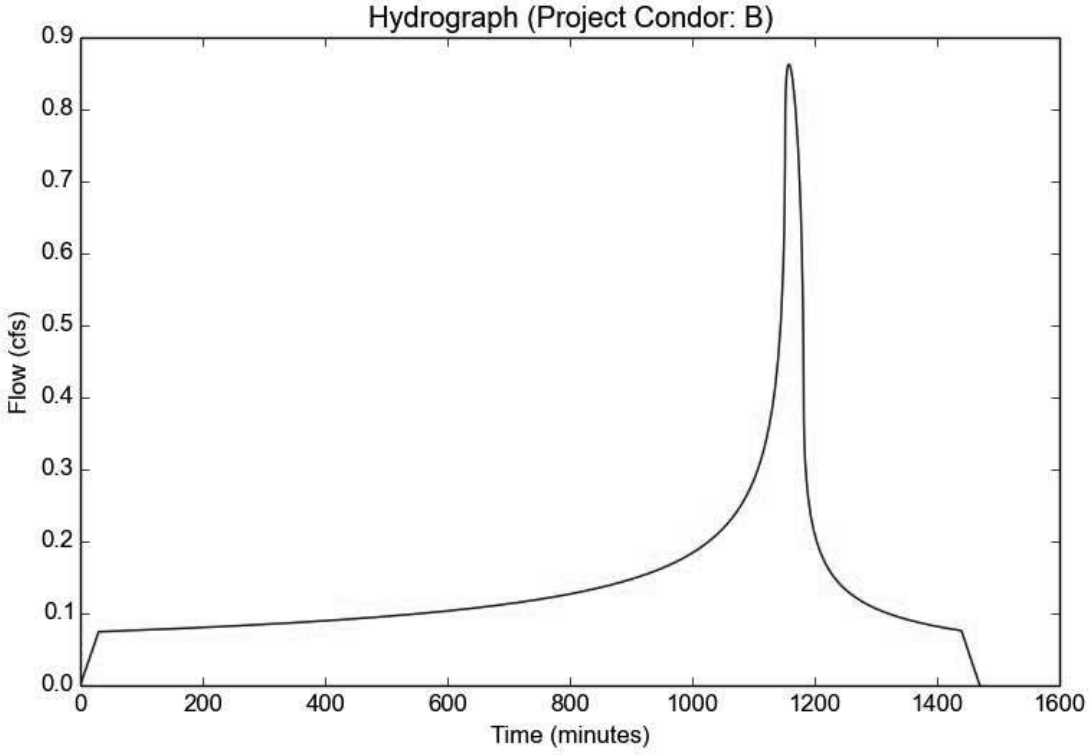
File location: M:/17001/Admin/17001-100/Reports/03_Third round fo the reports March 2019/LID/Calcs/85th Percentile Hydrocalc.pdf
Version: HydroCalc 1.0.3

Input Parameters

Project Name	Project Condor
Subarea ID	B
Area (ac)	3.86
Flow Path Length (ft)	700.0
Flow Path Slope (vft/hft)	0.01
85th Percentile Rainfall Depth (in)	1.05
Percent Impervious	0.91
Soil Type	13
Design Storm Frequency	85th percentile storm
Fire Factor	0
LID	True

Output Results

Modeled (85th percentile storm) Rainfall Depth (in)	1.05
Peak Intensity (in/hr)	0.2699
Undeveloped Runoff Coefficient (Cu)	0.1
Developed Runoff Coefficient (Cd)	0.828
Time of Concentration (min)	30.0
Clear Peak Flow Rate (cfs)	0.8625
Burned Peak Flow Rate (cfs)	0.8625
24-Hr Clear Runoff Volume (ac-ft)	0.2773
24-Hr Clear Runoff Volume (cu-ft)	12081.3211



Peak Flow Hydrologic Analysis

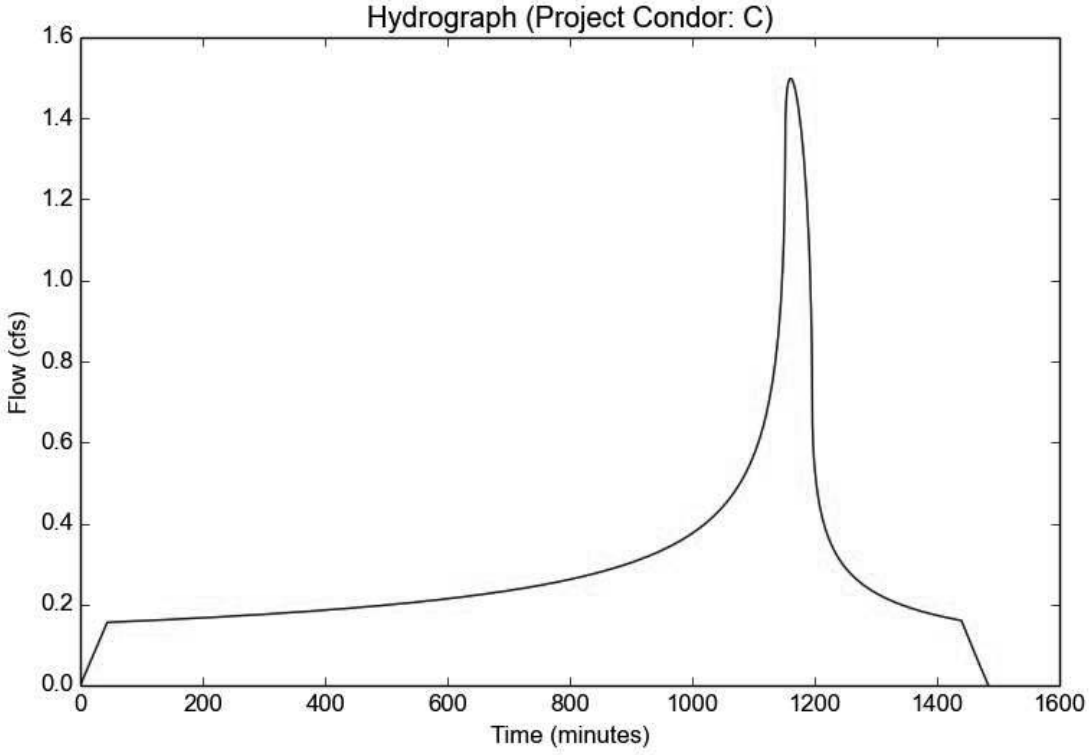
File location: M:/17001/Admin/17001-100/Reports/03_Third round fo the reports March 2019/LID/Calcs/85th Percentile Hydrocalc.pdf
Version: HydroCalc 1.0.3

Input Parameters

Project Name	Project Condor
Subarea ID	C
Area (ac)	7.73
Flow Path Length (ft)	1050.0
Flow Path Slope (vft/hft)	0.004
85th Percentile Rainfall Depth (in)	1.05
Percent Impervious	0.95
Soil Type	16
Design Storm Frequency	85th percentile storm
Fire Factor	0
LID	True

Output Results

Modeled (85th percentile storm) Rainfall Depth (in)	1.05
Peak Intensity (in/hr)	0.2254
Undeveloped Runoff Coefficient (Cu)	0.1
Developed Runoff Coefficient (Cd)	0.86
Time of Concentration (min)	44.0
Clear Peak Flow Rate (cfs)	1.4985
Burned Peak Flow Rate (cfs)	1.4985
24-Hr Clear Runoff Volume (ac-ft)	0.5769
24-Hr Clear Runoff Volume (cu-ft)	25129.3103



Peak Flow Hydrologic Analysis

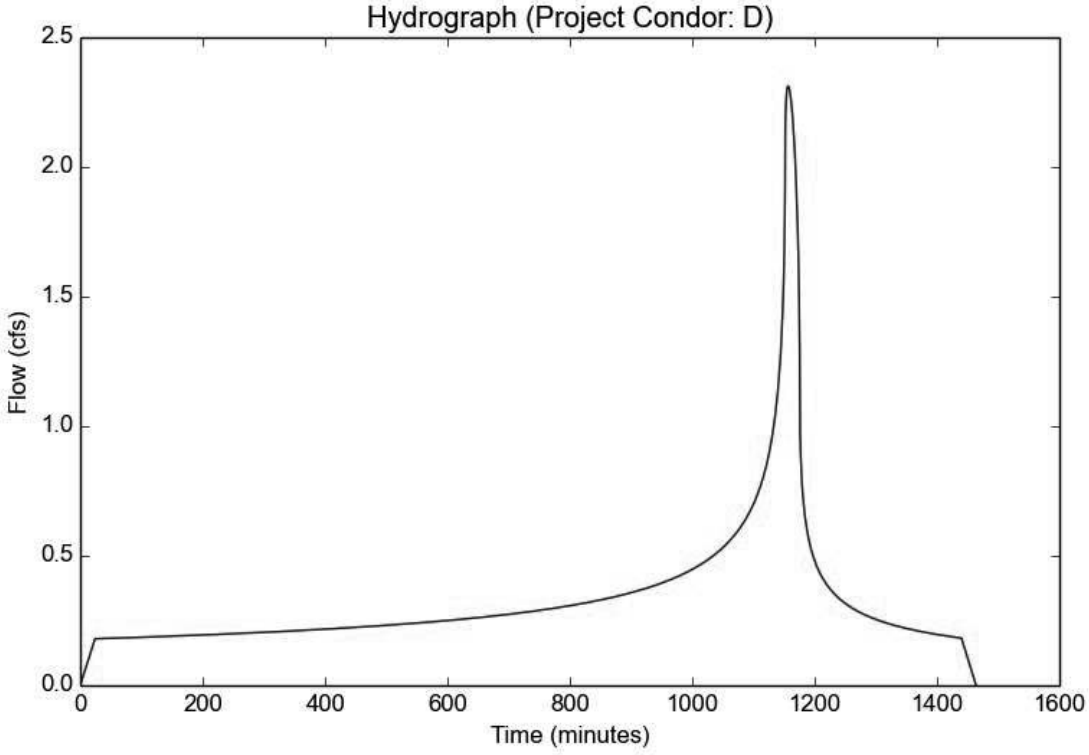
File location: M:/17001/Admin/17001-100/Reports/03_Third round fo the reports March 2019/LID/Calcs/85th Percentile Hydrocalc.pdf
Version: HydroCalc 1.0.3

Input Parameters

Project Name	Project Condor
Subarea ID	D
Area (ac)	8.97
Flow Path Length (ft)	490.0
Flow Path Slope (vft/hft)	0.008
85th Percentile Rainfall Depth (in)	1.05
Percent Impervious	0.95
Soil Type	16
Design Storm Frequency	85th percentile storm
Fire Factor	0
LID	True

Output Results

Modeled (85th percentile storm) Rainfall Depth (in)	1.05
Peak Intensity (in/hr)	0.2997
Undeveloped Runoff Coefficient (Cu)	0.1
Developed Runoff Coefficient (Cd)	0.86
Time of Concentration (min)	24.0
Clear Peak Flow Rate (cfs)	2.3121
Burned Peak Flow Rate (cfs)	2.3121
24-Hr Clear Runoff Volume (ac-ft)	0.6694
24-Hr Clear Runoff Volume (cu-ft)	29159.8894



Peak Flow Hydrologic Analysis

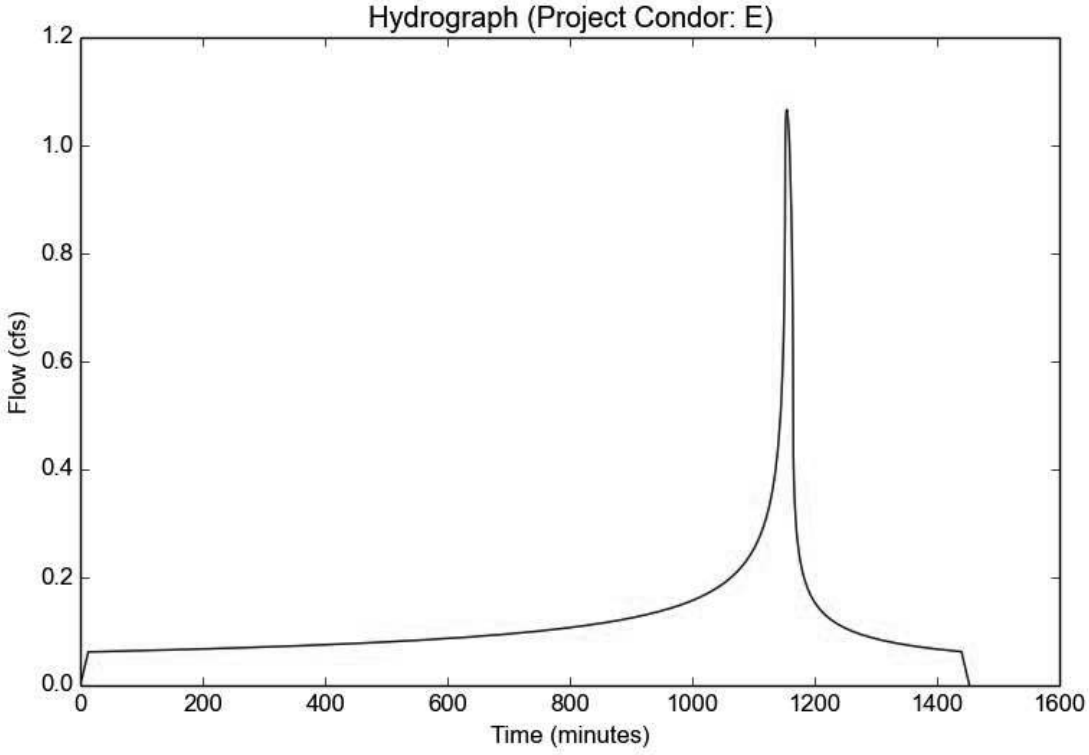
File location: M:/17001/Admin/17001-100/Reports/03_Third round fo the reports March 2019/LID/Calcs/85th Percentile Hydrocalc.pdf
Version: HydroCalc 1.0.3

Input Parameters

Project Name	Project Condor
Subarea ID	E
Area (ac)	3.19
Flow Path Length (ft)	190.0
Flow Path Slope (vft/hft)	0.01
85th Percentile Rainfall Depth (in)	1.05
Percent Impervious	0.92
Soil Type	16
Design Storm Frequency	85th percentile storm
Fire Factor	0
LID	True

Output Results

Modeled (85th percentile storm) Rainfall Depth (in)	1.05
Peak Intensity (in/hr)	0.3998
Undeveloped Runoff Coefficient (Cu)	0.1
Developed Runoff Coefficient (Cd)	0.836
Time of Concentration (min)	13.0
Clear Peak Flow Rate (cfs)	1.0662
Burned Peak Flow Rate (cfs)	1.0662
24-Hr Clear Runoff Volume (ac-ft)	0.2314
24-Hr Clear Runoff Volume (cu-ft)	10080.6767



Peak Flow Hydrologic Analysis

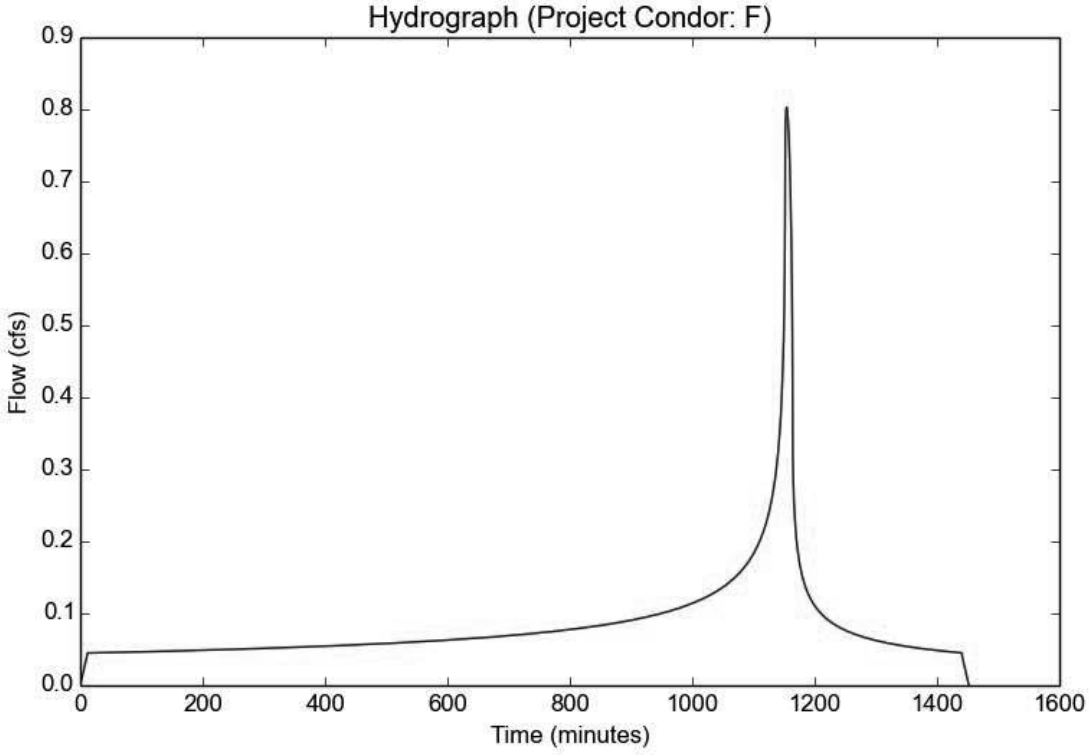
File location: M:/17001/Admin/17001-100/Reports/03_Third round fo the reports March 2019/LID/Calcs/85th Percentile Hydrocalc.pdf
Version: HydroCalc 1.0.3

Input Parameters

Project Name	Project Condor
Subarea ID	F
Area (ac)	2.31
Flow Path Length (ft)	180.0
Flow Path Slope (vft/hft)	0.01
85th Percentile Rainfall Depth (in)	1.05
Percent Impervious	0.92
Soil Type	16
Design Storm Frequency	85th percentile storm
Fire Factor	0
LID	True

Output Results

Modeled (85th percentile storm) Rainfall Depth (in)	1.05
Peak Intensity (in/hr)	0.4151
Undeveloped Runoff Coefficient (Cu)	0.1138
Developed Runoff Coefficient (Cd)	0.8371
Time of Concentration (min)	12.0
Clear Peak Flow Rate (cfs)	0.8028
Burned Peak Flow Rate (cfs)	0.8028
24-Hr Clear Runoff Volume (ac-ft)	0.1676
24-Hr Clear Runoff Volume (cu-ft)	7300.0099



Appendix C

Bio-Filtration Sizing Calculations

IBEC PROJECT

INGLEWOOD, CA

LID CALCULATIONS

DRAINAGE AREA		PLANTER
A		A1, A2
Site area:	1.27	ac
Impervious	0.95	%
85th Percentile:	1.05	in
Volume (V_m):	4167	cf
$V_{design} = V_m * 1.5$	6251	cf

Note: For Flow Through Planters

V_{design} = 1.5*Vm

Sizing		Units
K_{sat}	12	in/hour
FS	2	-
$K_{sat,des} = (K_{sat}/FS)$	6	in/hour
T	3	hrs
d_p	12	in
A_{min}=	**2,500**	**sf**

$$Amin = \frac{V_{design}}{\frac{T * K_{sat,des}}{12} + d_p}$$

T= Drawdown Time

d_p = Ponding Depth

A_{min} = Minimum Area Required

IBEC PROJECT

INGLEWOOD, CA

LID CALCULATIONS

DRAINAGE AREA		PLANTER
B		B1, B2, B3, B4

Site area:	3.86	ac
Impervious	0.95	%
85th Percentile:	1.05	in
Volume (V_m):	12081	cf
$V_{design} = V_m * 1.5$	18122	cf

Note: For Flow Through Planters

V_{design} = 1.5*Vm

Sizing		Units
K_{sat}	12	in/hour
FS	2	-
$K_{sat,des} = (K_{sat}/FS)$	6	in/hour
T	3	hrs
d_p	12	in
A_{min}=	**7,249**	**sf**

$$Amin = \frac{V_{design}}{\frac{T * K_{sat,des}}{12} + d_p}$$

T= Drawdown Time

d_p = Ponding Depth

A_{min} = Minimum Area Required

IBEC PROJECT

INGLEWOOD, CA

LID CALCULATIONS

DRAINAGE AREA	PLANTER
C	CD1-CD11

Site area:	7.73	ac
Impervious	0.95	%
85th Percentile:	1.05	in
Volume (V_m):	25129	cf
$V_{design} = V_m * 1.5$	37694	cf

Note: For Flow Through Planters

V_{design} = 1.5*Vm

Sizing		Units
K_{sat}	12	in/hour
FS	2	-
$K_{sat,des} = (K_{sat}/FS)$	6	in/hour
T	3	hrs
d_p	12	in
A_{min}=	**15,077**	**sf**

$$Amin = \frac{V_{design}}{\frac{T * K_{sat,des}}{12} + d_p}$$

T= Drawdown Time

d_p = Ponding Depth

A_{min} = Minimum Area Required

IBEC PROJECT

INGLEWOOD, CA

LID CALCULATIONS

DRAINAGE AREA	PLANTER
D	CD1-CD11

Site area:	8.97	ac
Impervious	0.95	%
85th Percentile:	1.05	in
Volume (V_m):	29160	cf
$V_{design} = V_m * 1.5$	43740	cf

Note: For Flow Through Planters

V_{design} = 1.5*Vm

Sizing		Units
K_{sat}	12	in/hour
FS	2	-
$K_{sat,des} = (K_{sat}/FS)$	6	in/hour
T	3	hrs
d_p	12	in
A_{min}=	**17,496**	**sf**

$$A_{min} = \frac{V_{design}}{\frac{T * K_{sat,des} + d_p}{12}}$$

T= Drawdown Time

d_p = Ponding Depth

A_{min} = Minimum Area Required

IBEC PROJECT

INGLEWOOD, CA

LID CALCULATIONS

DRAINAGE AREA	PLANTER
E	E1, E2

Site area:	3.19	ac
Impervious	0.95	%
85th Percentile:	1.05	in
Volume (V_m):	10081	cf
$V_{design} = V_m * 1.5$	15122	cf

Note: For Flow Through Planters

V_{design} = 1.5*Vm

Sizing		Units
K_{sat}	12	in/hour
FS	2	-
$K_{sat,des} = (K_{sat}/FS)$	6	in/hour
T	3	hrs
d_p	12	in
A_{min}=	**6,049**	**sf**

$$Amin = \frac{V_{design}}{\frac{T * K_{sat,des}}{12} + d_p}$$

T= Drawdown Time

d_p = Ponding Depth

A_{min} = Minimum Area Required

IBEC PROJECT

INGLEWOOD, CA

LID CALCULATIONS

DRAINAGE AREA F

PLANTER F1, F2

Site area:	2.31	ac
Impervious	0.95	%
85th Percentile:	1.05	in
Volume (V_m):	7300	cf
$V_{design} = V_m * 1.5$	10950	cf

Note: For Flow Through Planters

V_{design} = 1.5*Vm

Sizing		Units
K_{sat}	12	in/hour
FS	2	-
$K_{sat,des} = (K_{sat}/FS)$	6	in/hour
T	3	hrs
d_p	12	in
A_{min}=	**4,380**	**sf**

$$Amin = \frac{V_{design}}{\frac{T * K_{sat,des}}{12} + d_p}$$

T= Drawdown Time

d_p = Ponding Depth

A_{min} = Minimum Area Required

Inglewood Basketball and Entertainment Center Preliminary Hydrology Report

AECOM

WILSON MEANY

D & D ENGINEERING, INC.

INGLEWOOD BASKETBALL AND ENTERTAIMENT CENTER

PRELIMINARY HYDROLOGY REPORT

May 1, 2019

D & D Engineering, Inc.
8901 S. La Cienega Blvd.
Inglewood, CA 90301
424-351-6800

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- *Sub-areas HydroCalc Worksheets*

Appendix D

Post-Development Runoff Calculations and Basin Routing

- *Figure 4 — Post-Development Hydrology Map*
- *Figure 5 — Proposed Onsite Runoff Distribution to Existing Storm Drain Lines*
- *Sub-Areas HydroCalc Worksheets*
- *Summary of Post-Development Runoff Distribution to Existing Storm Drain Systems*

Appendix E

Los Angeles County As-Built Plans

- *LACDPW Project 4402 & 681 As-Built Plans*
- *LACDPW Project 4401, Line A As-Built Plans*
- *LACDPW DDI # 8 As-Built Plans*

I. INTRODUCTION

The purpose of this report is to outline and describe the onsite hydrology and existing storm drain infrastructure serving the existing site where Inglewood Basketball and Entertainment Center (IBEC) Project is to be constructed on. Additionally, this report will present the on-site hydrology of the proposed project, quantify the proposed storm runoff flows, the proposed, and the new storm drain infrastructure necessary to accommodate the proposed project. New infrastructure design is to adhere to the approved Los Angeles County Department of Public Works (LACDPW) allowable storm drain discharges from the site.

II. SITE DESCRIPTION

IBEC Project is comprised of three sites located near the intersection of Century Boulevard and Prairie Avenue in the city of Inglewood. The first and main project site is located to the southeast of the intersection, the second is located to the southwest of the intersection, and the third site is further east, just east of Doty avenue. The first site of the proposed development includes a multi-purpose sport arena, a parking structure and other miscellaneous use buildings. The site is located on an approximately 17-acre parcel bound by Century Blvd on the North, Prairie Ave on the West, Doty Ave on the East and 103th Street on the South. The second site includes proposed parking structure over an approximately 5.5-acre site, just west of Prairie Avenue. The third site includes proposed approximately 2.9-acre surface parking and portion of vacant land over an approximately 5-acre site, not contiguous to the main project site, just east of Doty Avenue. Refer to the project site map, *Figure 1 — Vicinity Map,* for project site locations.

The existing site over the proposed main project site currently contains commercial buildings, a hotel, a fast-food restaurant and vacant land for significant portion. The existing site over the proposed parking structure site consists of twenty-seven parcels that are all currently vacant lots. The existing site over the proposed surface parking site consists of five parcels that are all currently vacant lots.

The site topography generally slopes from the north-east to south-west corner.

Currently, the existing site runoff is discharging to surrounding public streets where it is collected by the existing storm drain system. There is currently no existing on-site storm drain system in place. The existing runoff breakdown from project sites to the existing storm drain systems is as follows:

- Majority of main site runoff of 18.4 cfs to Project 4402 and Project 681 County storm drain lines.

- Parking structure site runoff is split to two systems – portion north of 101st Street runoff of 2.8 cfs to Project 4402 Line B and portion south of 101st Street runoff of 4.8 cfs to DDI#0008 Freeman Avenue County storm drain lines.
- Surface parking runoff of 6.3 cfs to DDI # 0008 Yukon County storm drain line.

III. EXISTING STORM DRAIN SYSTEMS DESCRIPTION AND CAPACITY

Existing as-built record drawings and hydrology maps were obtained from LACDPW to characterize the storm drains that currently serve the project sites. The as-built plans can be found in *Appendix E*.

The existing storm drain systems serving the project sites are maintained by the LACDPW and include Project 4401 Line A, Project 4402 & 681 and Project DDI # 8. These are located adjacent to the project site along Prairie and Doty Avenues. Refer to *Figure 2 — Existing Storm Drains* for existing off-site storm drain infrastructure.

The table below summarizes the storm drain infrastructure adjacent to the project site based on the latest available as-built and record drawings reviewed to date.

Location	Size	Notes
Prairie Avenue	LACDPW Project 4402 & 681- 60" diameter storm drain that flows south along Prairie Avenue.	Collects runoff flowing to Prairie from offsite properties as well as majority of proposed site
Doty Avenue	LACDPW Project 4401, Line A – 7'-0" W x 9'-0" H RCB that flows south along Doty Ave	Accepts flows from Projects 4401, Line B and MTD 922 north of Century Avenue and runoff to Doty Avenue from adjacent properties
East of Doty Avenue	LACDPW Project DDI # 8 – 4'-3" W x 4'-0" H RCB	Flowing south parallel and to the east of Doty Avenue

An information request was submitted to the LACDPW to obtain information regarding capacities of the existing storm drain systems listed above and the allowable Q's that can be discharged from the project sites to these storm drain systems. Refer to *Appendix A* for a summary of the allowable storm water discharges to Project 4401, Project 4402 and DDI #8 prepared and approved on October 2017 by the LACDPW Design Division.

IV. PROJECT DESCRIPTION

IBEC Project is a mixed-use project that includes a multi-purpose sport arena with auxiliary structures including retail, office buildings, restaurants, parking structures and plaza areas. The project consists of 71,000 sq. ft. of office space, 48,000 sq. ft. of retail and food services space, a 150-room hotel, 85,000 sq. ft. of practice facilities, 15,000 sq. ft. of community space, 25,000 sq. ft. of sports medicine clinic and an 18,000-fixed seat arena with an additional 500 temporary seats, a parking structures and surface parking.

V. HYDROLOGY ANALYSIS AND CALCULATIONS

Hydrologic calculations were performed utilizing the LACDPW Hydrology Manual dated January 2006 and county HydroCalc Program Method. Per the LACDPW hydrology Manual, The Capital Flood Level of Protection produced by a 50-year frequency design storm is applied to proposed on-site drainage areas and facilities in sump conditions.

The existing and post-development flow rates generated by the Condor project site were calculated using the LACDPW Inglewood 50-year, 24-hour isohyet (5.15 inches rainfall depth) and associated runoff coefficient curve (Soil Type No.16 for the main site and No.13 for the hotel and eastern parking site) and are shown in *Appendix C* and *Appendix D*.

VI. POST DEVELOPMENT RUNOFF AND BASIN ROUTING

IBEC Project consists of three major subareas as shown in *Figure 4 — Post-Development Hydrology Map*, with each of the project sites consisting of separate subareas. The main project site consists of two major drainage area, denoted as DA "A-3" and DA "A-4", with a contributing runoff to the existing Project 681 storm drain lines. The west parking structure site consists of another two major drainage area denoted as DA "A-5" and DA "A-6" with a contributing runoff to the existing Project 4402 & 681 storm drain lines. The east parking structure and hotel site consists of another two major drainage area denoted as DA "A-1" and DA "A-2", with a contributing runoff to the existing DDI #8 storm drain system. Design peak flows were calculated for a 50-year frequency design storm for basin routing, refer to *Appendix D* f or supporting calculations.

As shown in *Appendix C*- Pre-Development Runoff Calculations and *Appendix D – Post-Development Runoff Calculations*, the post-development runoff quantities exceed the pre-development runoff quantities. Additionally, the post-development peak flows for proposed drainage sub-areas exceed the approved allowable discharge rates to existing LACDPW Project 4402 & 681 and DDI #8 systems. Therefore, on-site detention is required for all three

project's sites. For the arena site, an underground precast detention facility with an approximately 100,800 cu.ft. volume is estimated. A similar detention facility will be required for the hotel and eastern parking site with a combined detention of approximately 8,900 cu. ft volume and for northerly portion of the west parking structure with approximately volume of 5,300 cu, ft. volume. The southerly portion of the parking structure drainage is anticipated to be diverted to the Prairie Avenue project # 681 storm drain instead of the Freeman storm drain system. A similar detention facility will not be feasible for the southerly parking structure site, therefore the additional detention from the arena site will compensate for the southerly portion of the parking structure. The arena site detention facility outfall will be restricted to a maximum 5.52 cfs and with the southerly parking structure peak runoff of 8.78 cfs, the total discharge to project # 681 of 14.30 cfs will not exceed the allowable flow rate of 14.32 cfs. The east parking structure and hotel site and northerly portion of the west parking structure detention facilities will have maximum outfall rates of 5.11 cfs and 1.96 cfs, respectfully.

Summary of allowable flow rates and project contributing flow rates table from all detention facilities can be found in *Appendix D Post-Development Runoff Calculations and Figure 5- Proposed Onsite Runoff Detention to Existing Storm Drain Lines*.

VII. Summary and Conclusion

The results of this study are summarized in following table.

Table 1- Allowable Runoff, existing and proposed flows

ITEM	**Project 4402 (CFS)**	**Project 681 (CFS)**	**DDI#8 (CFS)**	**TOTAL (CFS)**
Proposed Onsite 50-year Flow into Pipeline-prior to detention (Figure 4)	6.36 (Sub-area A6)	41.63 (Sub-areas A3, A4 & A5)	11.29 (Sub-areas A1 & A2)	59.28
Proposed Onsite 50-year Flow into Pipeline (HydroCalc, Figure 5) *	**1.96** (Sub-area A6 detention outfall)	**14.30** (Sub-areas A3 & A4 detention outfall & A5)	**5.11** (Sub-areas A1 & A2 detention outfall)	**21.37**
LACDPW Allowable Flow Rates (Appendix B)	2.31	14.32	5.13	21.76

*****Proposed runoff shown in the table are the maximum outfalls from detention facilities or proposed sites.

The Los Angeles County Department of Public Works, Design Division provided a confirmation of the allowable flow rates that may be discharged to each of the downstream storm drains adjacent to the project site, refer to *Appendix A* for the summary noticed provided by the LACDPW.

Based on our preliminary post-developed hydrology calculations the following has been observed:

- The design outfall from the arena site detention facility and southerly portion of the west parking structure for Project 681 is approximately 14.30 cfs and the LACDPW allowable limit is 14.32 cfs.
- The design outfall from the northerly portion of the west parking structure facility for Project 4402, Line C is approximately 1.96 cfs and the LACDPW allowable limit is 2.31 cfs.
- The design outfall from the east parking structure and hotel detention facilities for DDI #8 is approximately 5.11 cfs and the LACDPW allowable limit is 5.13 cfs.

In summary, Project Condor will discharge 1.96 cfs and 14.30 cfs to Project 4402 & 681 and 5.11 cfs to DDI # 8, all discharge rates being within the allowable limits of 2.31cfs, 14.32 cfs and 5.13 cfs, respectively, as set by the LACDPW. Therefore, the existing downstream storm drain lines have adequate capacity for the proposed discharge from the project site. On-site storm drain pipelines and detention facilities should be designed to provide the capital flood level of protection from runoff from a 50-year frequency design storm.

The information contained within this report will be used for obtaining future connection permits to Los Angeles County Flood Control District (LACFCD) facilities and represents the existing hydrology and hydraulic data that will be used for future on-site storm drainage design.

Figures

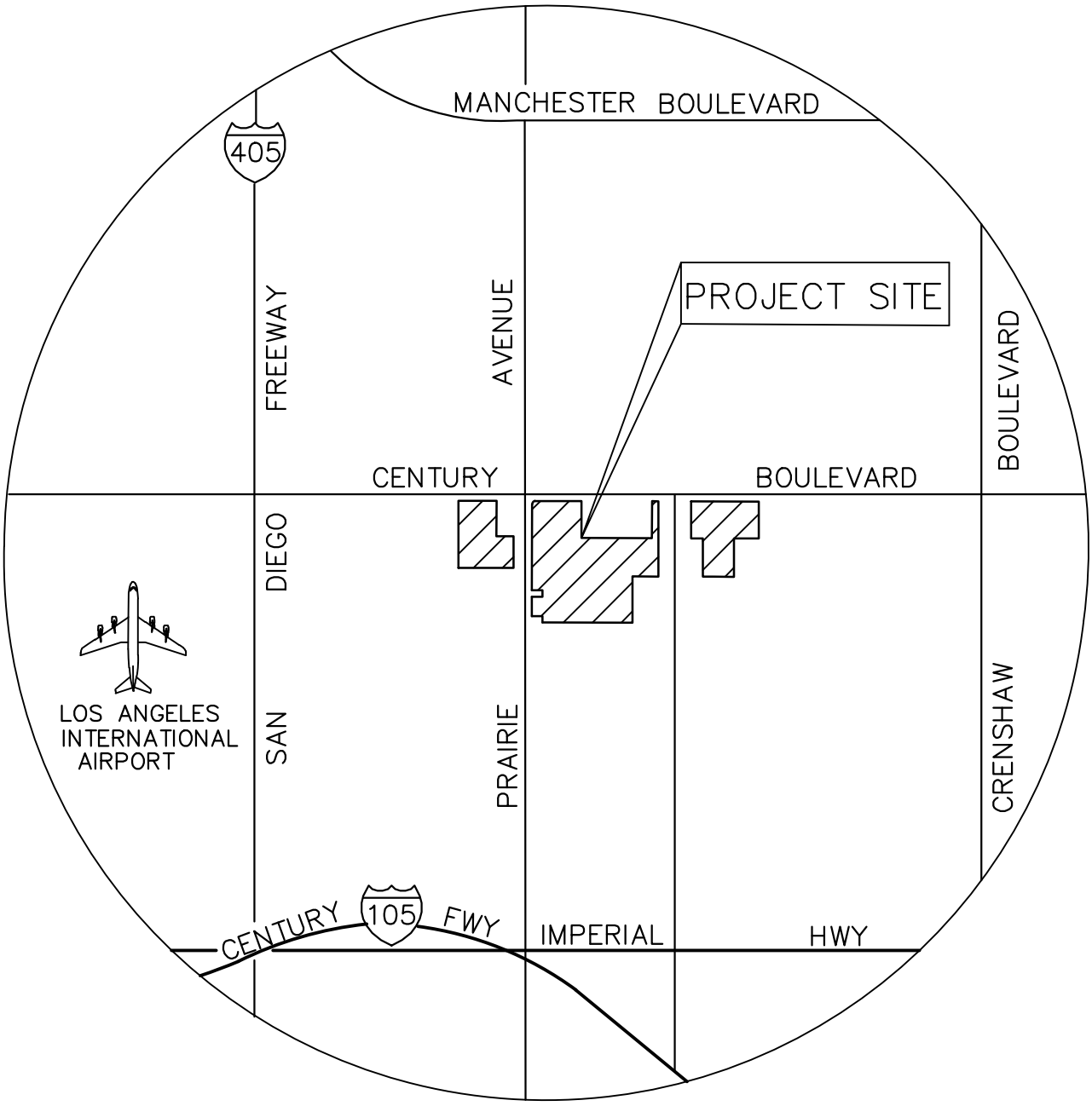


FIGURE 1

D & D ENGINEERING, INC.
8901 S. LA CIENEGA BLVD, SUITE 106
INGLEWOOD, CA 90301
Phone: 424-351-6800

INGLEWOOD BASKETBALL AND ENTERTAINMENT CENTER

VICINITY MAP

SCALE: AS SHOWN

DATE: 05/01/19

SHT NO.: 01 OF 01

Drawing Name: M:\17001\Eng\17001\Exhibits\08_Site Plan A Vic Map\Vicinity map.dwg
Last Opened: May 01, 2019 - 4:42pm by: Boris

LEGEND

- PROJECT STUDY LIMITS
- EXISTING STORM DRAIN LINES
- EXISTING CITY OF INGLEWOOD STORM DRAIN LINE

80 0 80 160
scale 1" = 80' feet

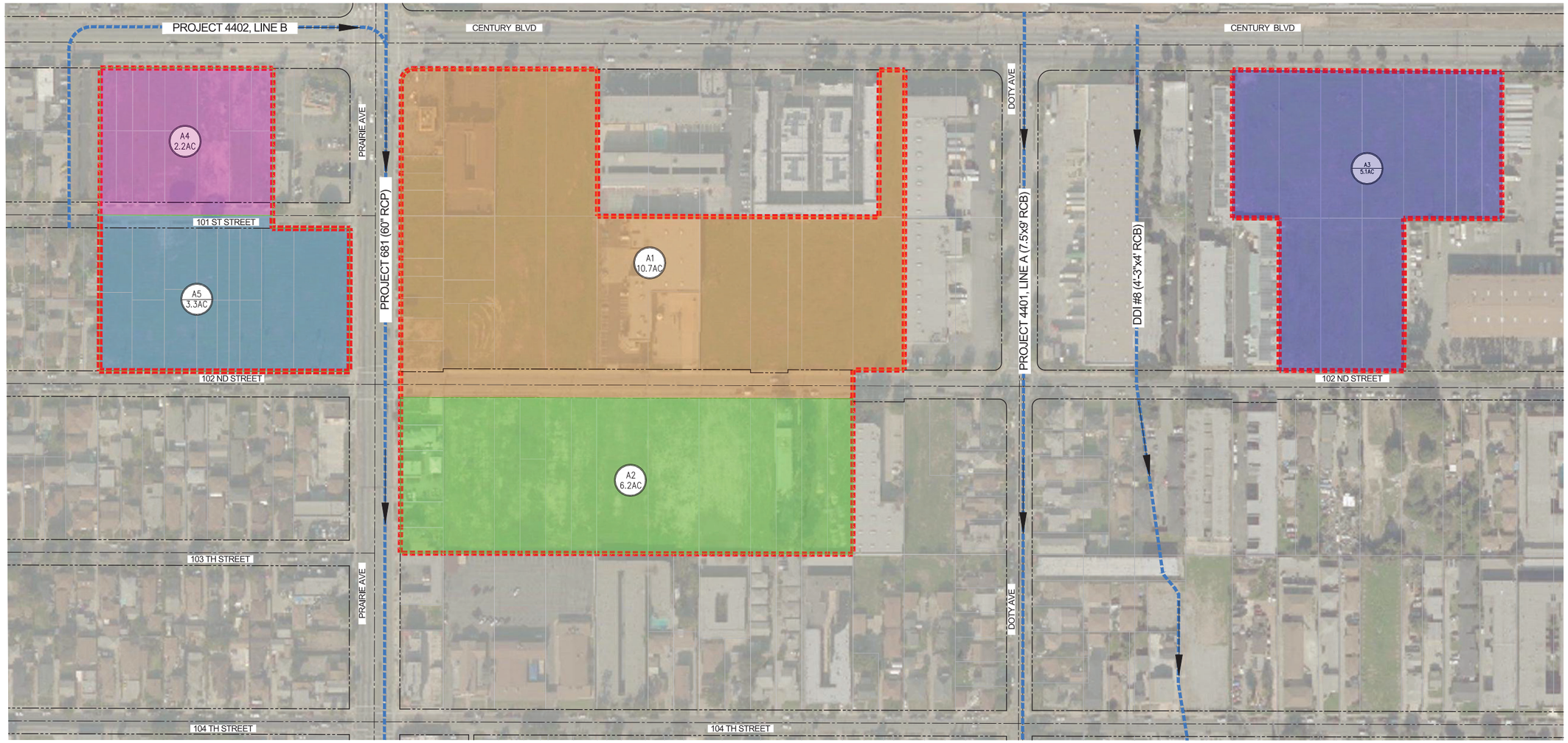
FIGURE 2

D & D ENGINEERING, INC.
8901 S. LA CIENEGA BLVD, SUITE 106
INGLEWOOD, CA 90301
Phone: 424-351-6800

INGLEWOOD BASKETBALL AND ENTERTAINMENT CENTER

EXISTING STORM DRAINS

SCALE: 1" = 80'
DATE: 04/29/19
SHT NO.: 1 OF 1



SUBAREA	ACREAGE	SOIL TYPE	LENGTH	SLOPE	Q25
A1	10.7	16	965'	0.004	11.8 cfs
A2	6.2	16	910'	0.004	6.6 cfs
A3	5.1	13	685'	0.004	6.3 cfs
A4	3.3	16	427	0.005	4.8 cfs
A5	2.2	16	600	0.003	2.6 cfs
TOTAL	27.5	---	---	---	32.1 cfs

80 0 80 160
scale 1" = 80' feet

LEGEND

PROJECT STUDY LIMITS

EXISTING STORM DRAIN LINES

AREA / ACRES

DRAINAGE SUBAREA

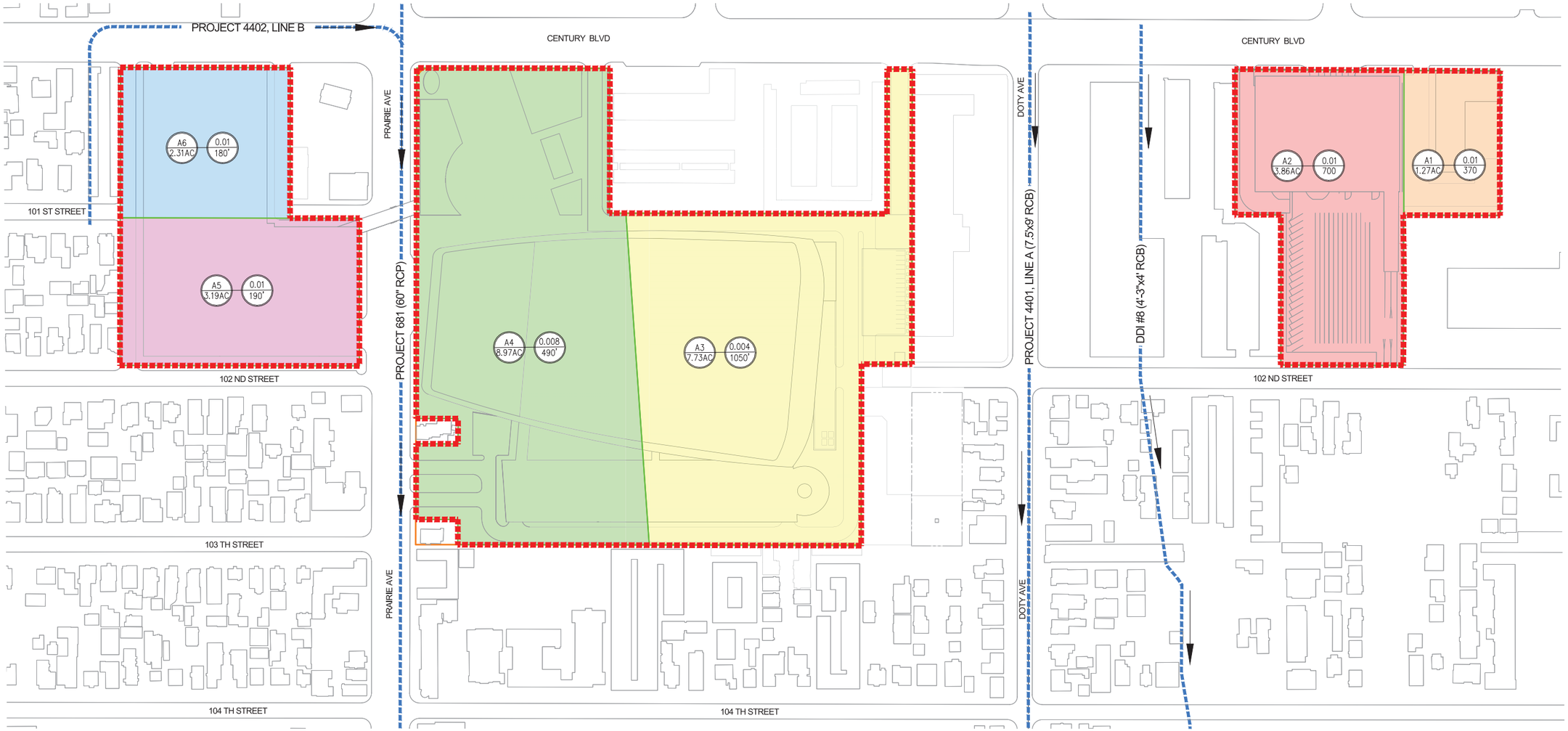
FIGURE 3

D & D ENGINEERING, INC.
8901 S. LA CIENEGA BLVD, SUITE 106
INGLEWOOD, CA 90301
Phone: 424-351-6800

INGLEWOOD BASKETBALL AND ENTERTAINMENT CENTER

PRE-DEVELOPMENT HYDROLOGY MAP

SCALE: 1" = 80'
DATE: 04/29/19
SHT NO.: 1 OF 1



SUBAREA	ACREAGE [AC.]	LENGTH [FT.]	SLOPE	Q_{100}
A1	1.3	370'	0.010	3.22 cfs
A2	3.9	700'	0.010	8.07 cfs
A3	7.7	1050'	0.004	13.06 cfs
A4	9.0	490'	0.008	19.79 cfs
A5	3.2	190'	0.010	8.78 cfs
A6	2.3	180'	0.010	6.36 cfs
TOTAL	27.4	---	---	59.28 cfs

LEGEND

- PROJECT STUDY LIMITS
- EXISTING STORM DRAIN LINES
- DRAINAGE AREA
- AREA (ACRES) / SLOPE (LENGTH)

80 0 80 160
scale 1" = 80' feet

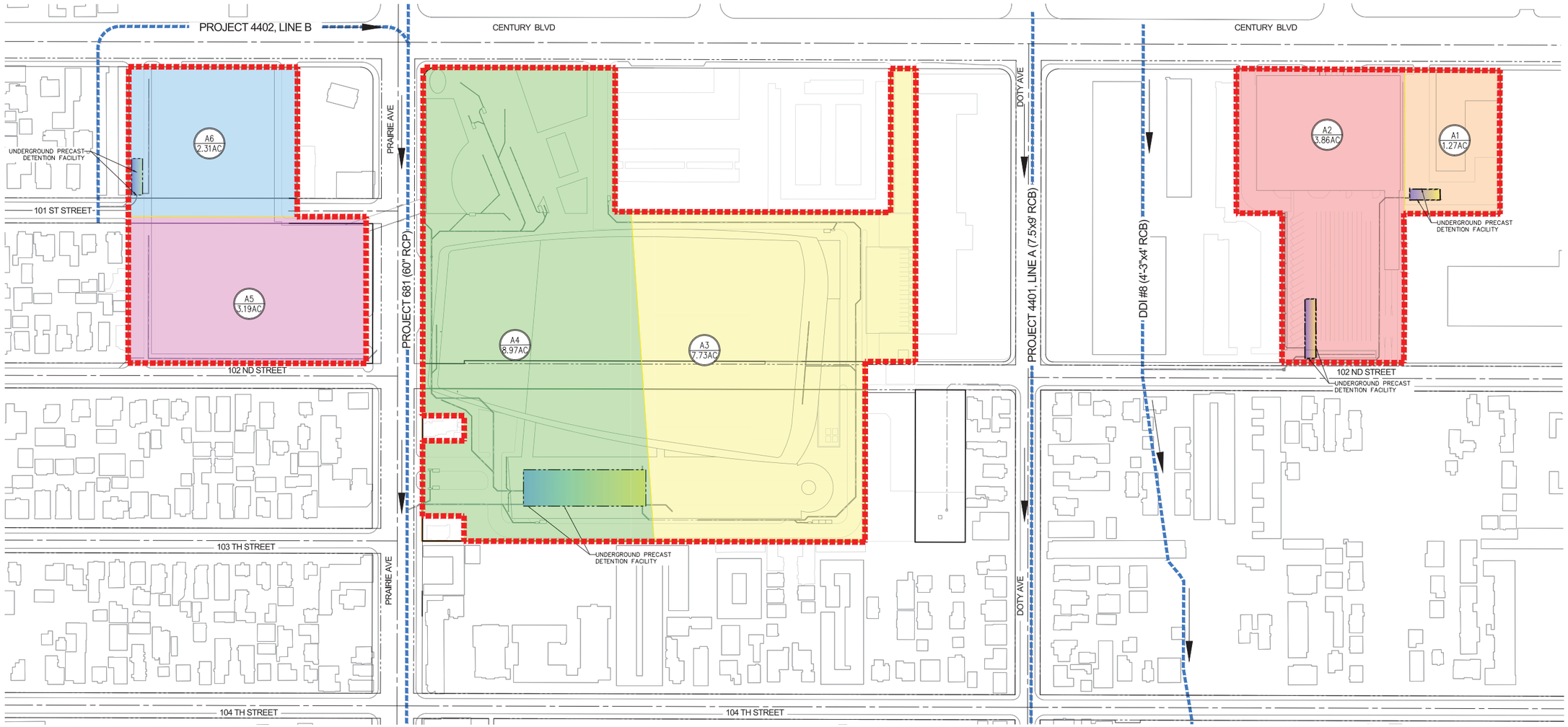
FIGURE 4

D & D ENGINEERING, INC.
8901 S. LA CIENEGA BLVD, SUITE 106
INGLEWOOD, CA 90301
Phone: 424-351-6800

INGLEWOOD BASKETBALL AND ENTERTAINMENT CENTER

POST-DEVELOPMENT HYDROLOGY MAP

SCALE: 1" = 80'
DATE: 04/29/19
SHT NO.: 1 OF 1



SUBAREA	ACREAGE [AC.]	LENGTH [FT.]	SLOPE	Q_{50}
A1	1.3	370'	0.010	3.22 cfs
A2	3.9	700'	0.010	8.07 cfs
A3	7.7	1050'	0.004	13.06 cfs
A4	9.0	490'	0.008	19.79 cfs
A5	3.2	190'	0.010	8.78 cfs
A6	2.3	180'	0.010	6.36 cfs
TOTAL	27.4	---	---	59.28 cfs

EXISTING STORM DRAIN LINE	CONTRIBUTING ON-SITE DRAINAGE AREA	ALLOWABLE DISCHARGE TO EXISTING LINE [CFS/AC.]	TOTAL ALLOWABLE DISCHARGE TO EXISTING LINE [CFS]	PROPOSED Q_{50} FLOW [CFS]	REQUIRED FLOW TO BE MITIGATED WITH STORAGE [CFS]	STORAGE PROVIDED [CF]	OUTFLOW [CFS]	NOTE
PROJECT DDI #8	A1 & A2	1.00	5.13	11.29	6.16	8900	5.11	SUFFICIENT SD CAPACITY
PROJECT 4402 LINE C	A6	1.00	2.31	6.36	4.05	5300	1.96	SUFFICIENT SD CAPACITY
PROJECT 681	A3, A4 & A5	0.72	14.32	41.63	27.31	100800	14.30	SUFFICIENT SD CAPACITY

* TOTAL RUNOFF FROM DRAINAGE AREAS A3 & A4 DETENTION FACILITY OUTFALL OF 5.52 CFS AND DRAINAGE AREA A5 RUNOFF OF 8.78 CFS.

LEGEND

- PROJECT STUDY LIMITS
- EXISTING STORM DRAIN LINES
- DRAINAGE SUB-AREA
- (AREA / ACRES) (SLOPE / LENGTH)

80 0 80 160
scale 1" = 80' feet

FIGURE 5

D & D ENGINEERING, INC.
8901 S. LA CIENEGA BLVD, SUITE 106
INGLEWOOD, CA 90301
Phone: 424-351-6800

INGLEWOOD BASKETBALL AND ENTERTAINMENT CENTER

PROPOSED ONSITE RUNOFF DISTRIBUTION TO EXISTING STORM DRAIN LINES

SCALE: 1" = 80'
DATE: 04/29/19
SHT NO.: 1 OF 1

D & D ENGINEERING, INC.

Appendix A

Off-Site Hydrology and LACDOW Information Request Summary

Figure 2 — Existing Storm Drains

Offsite Tributary Area Map for Project 4402 & 681

Offsite Tributary Area Map for Project DDI #8

Information Request Summary

LEGEND

- PROJECT STUDY LIMITS
- EXISTING STORM DRAIN LINES
- EXISTING CITY OF INGLEWOOD STORM DRAIN LINE

80 0 80 160
scale 1" = 80' feet

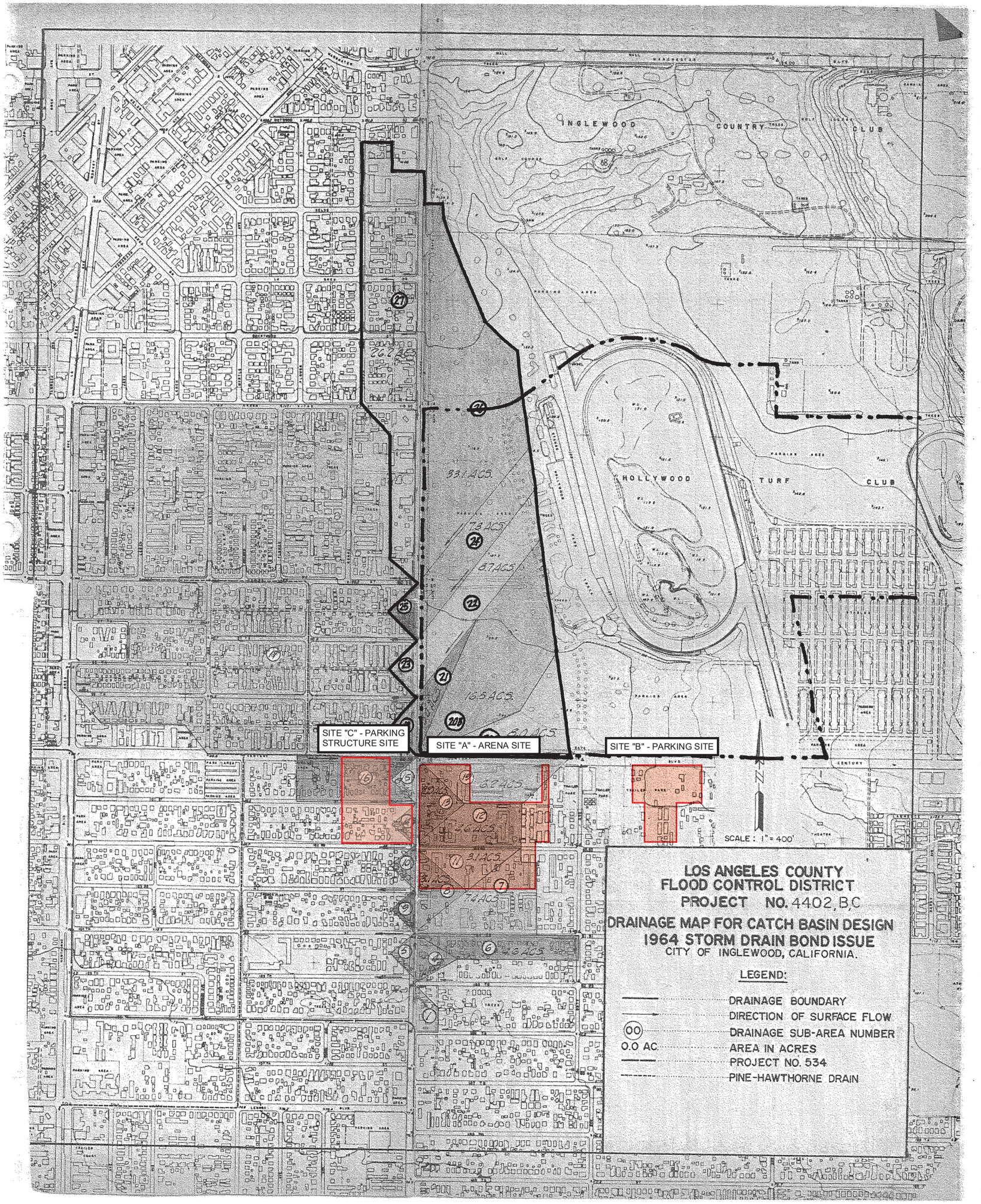
FIGURE 2

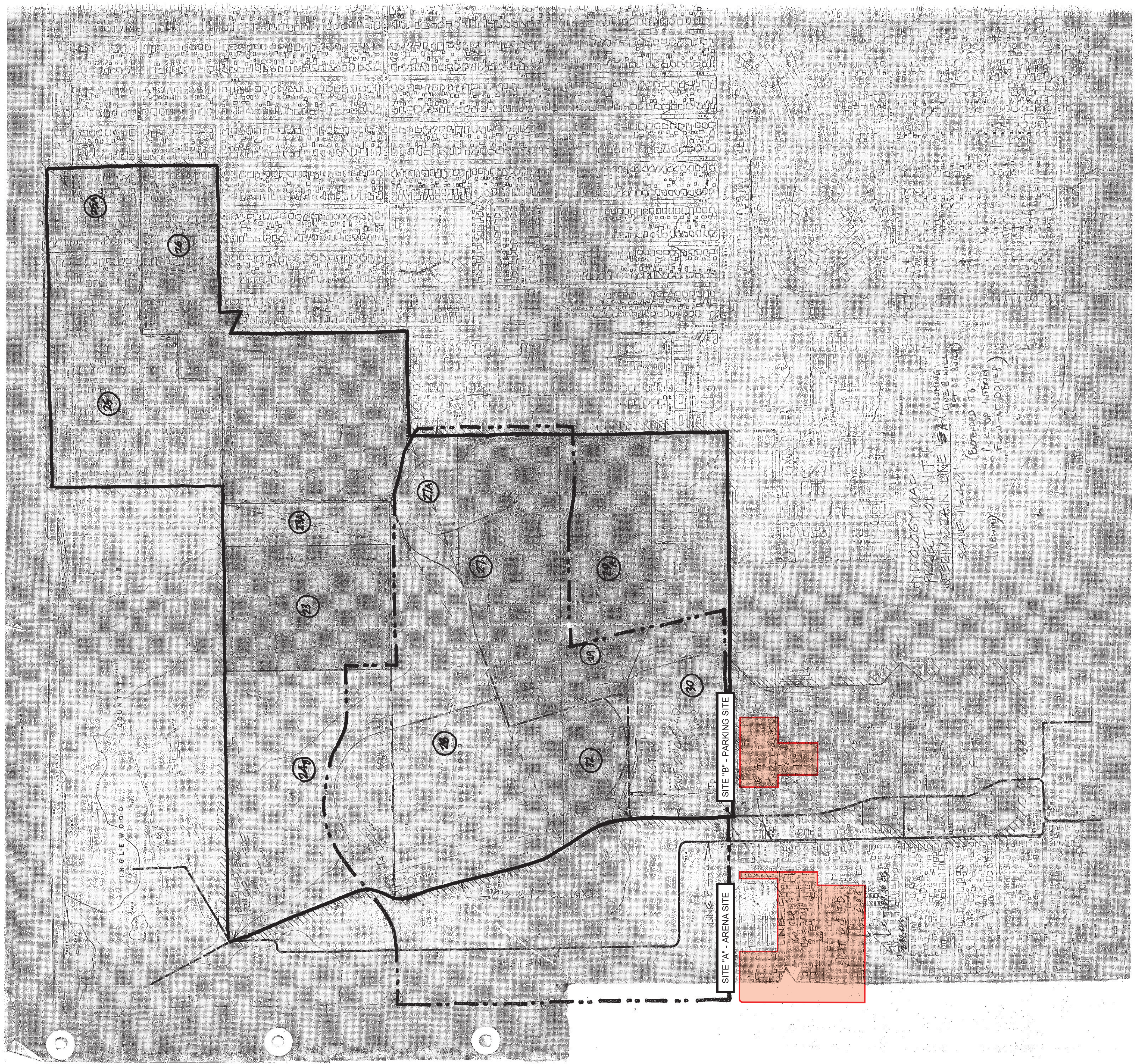
D & D ENGINEERING, INC.
8901 S. LA CIENEGA BLVD, SUITE 106
INGLEWOOD, CA 90301
Phone: 424-351-6800

INGLEWOOD BASKETBALL AND ENTERTAINMENT CENTER

EXISTING STORM DRAINS

SCALE: 1" = 80'
DATE: 04/29/19
SHT NO.: 1 OF 1


INGLEWOOD COUNTRY CLUB
HOLLYWOOD TURF CLUB
SITE "C" - PARKING STRUCTURE SITE
SITE "A" - ARENA SITE
SITE "B" - PARKING SITE
SCALE : 1" = 400'
LOS ANGELES COUNTY
FLOOD CONTROL DISTRICT
PROJECT NO. 4402, B, C
DRAINAGE MAP FOR CATCH BASIN DESIGN
1964 STORM DRAIN BOND ISSUE
CITY OF INGLEWOOD, CALIFORNIA.
LEGEND:
DRAINAGE BOUNDARY
DIRECTION OF SURFACE FLOW
(00) DRAINAGE SUB-AREA NUMBER
0.0 AC. AREA IN ACRES
PROJECT NO. 534
PINE-HAWTHORNE DRAIN


SITE "B" - PARKING SITE
SITE "A" - ARENA SITE
LINE B
HOLLYWOOD
TURF
INGLEWOOD
COUNTRY
CLUB
HYDROLOGY MAP
PROJECT 4401 UNIT 1
INTERIM DRAIN LINE #A (ASSUMING LINE B WILL NOT BE BUILT)
SCALE 1"=400'
(EXTENDED TO PICK UP INTERIM FLOW AT DDI #8)
(PRELIM)

Office Use Only
☐ Sent Initials: _____
☐ Fax ☒ Email ☐ Other: _____
Date: _____ Time: _____

LOS ANGELES COUNTY
DEPARTMENT OF PUBLIC WORKS
DESIGN DIVISION – HYDRAULIC ANALYSIS UNIT
INFORMATION REQUEST SUMMARY

INFORMATION REQUESTED BY

*Requester's Name: Boris Tantchev
Company: D & D Engineering, Inc.
*Phone Number: 8182-653-8666 Fax Number: 424-393-4122
*Email: BTantchev@DandDEngineeringInc.com

Method of Contact: ☐ Walk-in ☐ Phone ☐ Fax ☒ Email ☐ Prelim. Mtg. Date: 10/18/17

Intended Use: Research and Due Diligence

Proposed Project Type: Land Development - Mixed Use and Retail/Com Acreage Involved: 26

*Will information be used in any litigation? ☐ YES ☒ NO
Case Info. Name: _____ No: _____ Location: _____

INFORMATION REQUESTED (Attach Assessor Map)

LACFCD Facility: Name: LACFCD Proj #681 and Proj #4401-U1 Line A, and DDI 0008
Unit: _____ Line: _____ Station: _____
City: Inglewood
*Street/Cross-street: Century Blvd and Prairie Avenue
*Thomas Guide: Page: 703 Grid: E5 ☒ Site Map/Plans Submitted
Info. Requested: Allowable Q

***Required Information. See Page 2 of 2 for Instructions.**

BELOW SECTION TO BE COMPLETED BY THE HYDRAULIC ANALYSIS UNIT

INFORMATION PROVIDED: Allowable q per acre.

REFERENCES SEARCHED: Projects 534, 4401, 4402 and DDI 8 Hydrology.

COMMENTS, ETC:
Allowable q per acre for connection to Project 4402 = 1.00 cfs.
Allowable q per acre for connection to Project 4401 = 0.70 cfs
Allowable q per acre for connection to DDI 8 = 1.00 cfs.
* Allowable Discharge into Project 681 is limited to 0.72 cfs/acre based on Project No 534 Hydrology.

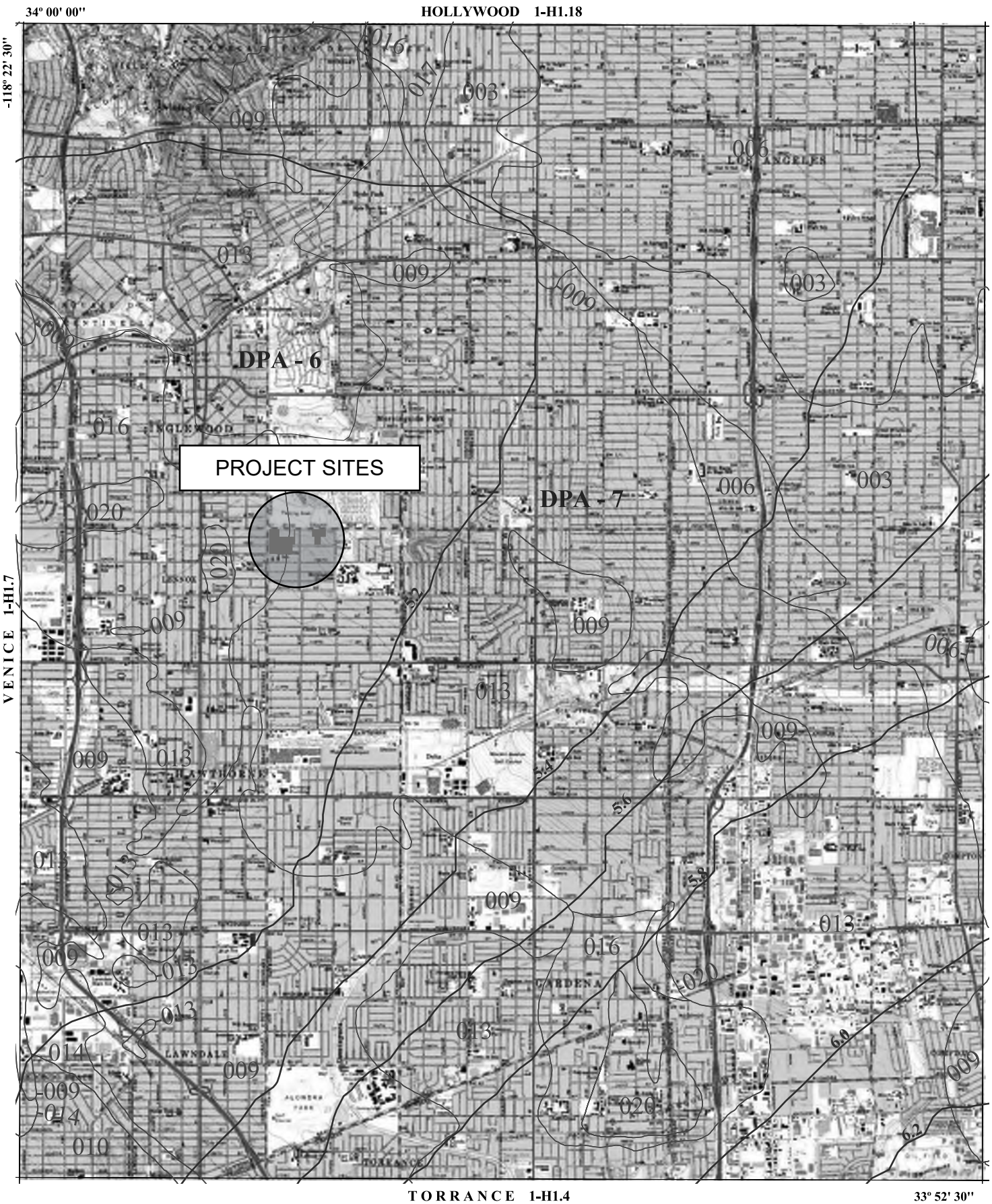
INFORMATION PROVIDED BY: Ambrose C Ajaelo, PE Date: 10/26/2017
INFORMATION REVIEWED BY: George Aintablian Date: 9/26/2018

Print Save a Copy

D & D ENGINEERING, INC.

Appendix B

LACDPW, 2006 Hydrology Manual, Appendix B
Hydrologic Maps, 08 Inglewood



016 SOIL CLASSIFICATION AREA

7.2 INCHES OF RAINFALL

DPA - 6 DEBRIS POTENTIAL AREA

1 0 1 2 Miles

25-YEAR 24-HOUR ISOHYET REDUCTION FACTOR: 0.878
10-YEAR 24-HOUR ISOHYET REDUCTION FACTOR: 0.714

INGLEWOOD
50-YEAR 24-HOUR ISOHYET

1-H1.8

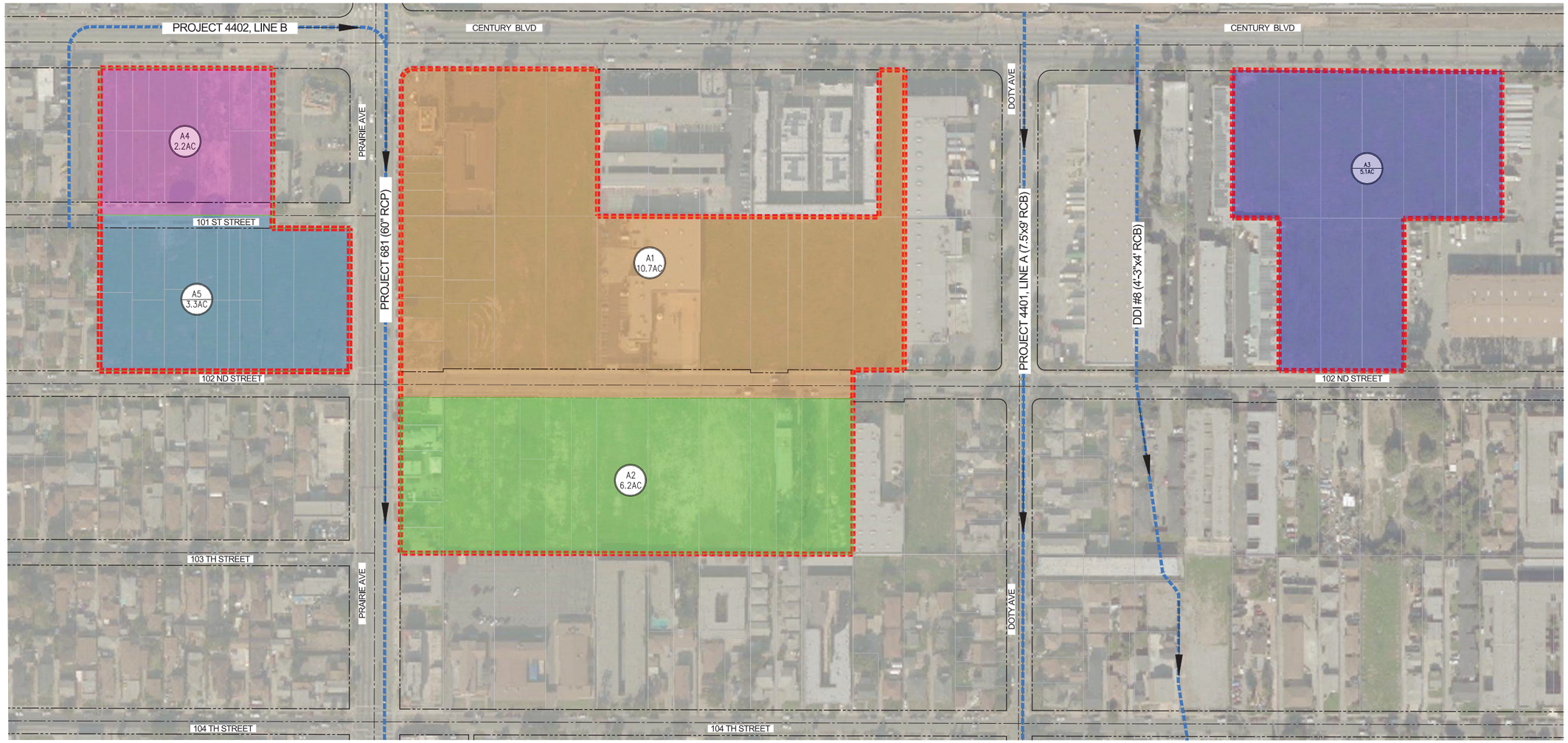
LOS ANGELES COUNTY PUBLIC WORKS

D & D ENGINEERING, INC.

Appendix C

Pre-Development Runoff Calculations

Figure 3 — Pre-Development Hydrology Map
Sub-areas HydroCalc Worksheets



SUBAREA	ACREAGE	SOIL TYPE	LENGTH	SLOPE	Q25
A1	10.7	16	965'	0.004	11.8 cfs
A2	6.2	16	910'	0.004	6.6 cfs
A3	5.1	13	685'	0.004	6.3 cfs
A4	3.3	16	427	0.005	4.8 cfs
A5	2.2	16	600	0.003	2.6 cfs
TOTAL	27.5	---	---	---	32.1 cfs

80 0 80 160
scale 1" = 80' feet

LEGEND

PROJECT STUDY LIMITS

EXISTING STORM DRAIN LINES

AREA / ACRES

DRAINAGE SUBAREA

FIGURE 3

D & D ENGINEERING, INC.
8901 S. LA CIENEGA BLVD, SUITE 106
INGLEWOOD, CA 90301
Phone: 424-351-6800

INGLEWOOD BASKETBALL AND ENTERTAINMENT CENTER

PRE-DEVELOPMENT HYDROLOGY MAP

SCALE: 1" = 80'
DATE: 04/29/19
SHT NO.: 1 OF 1

Peak Flow Hydrologic Analysis

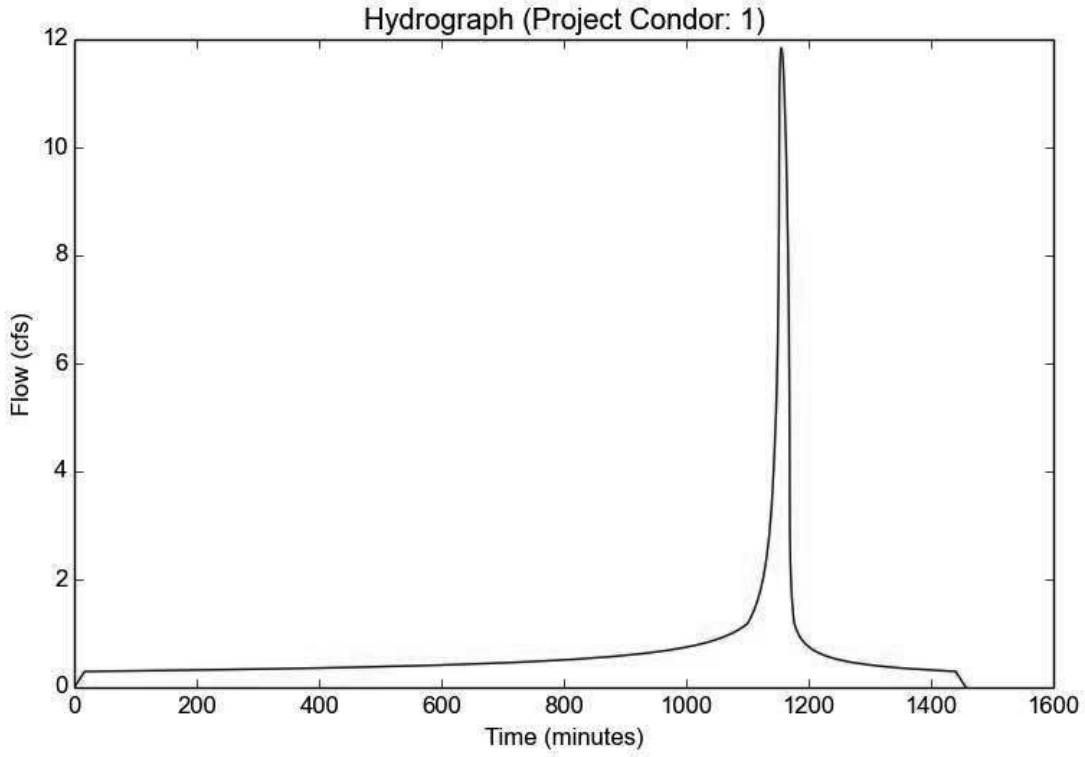
File location: M:/17001/Eng/17001/Hm/Hydrology/Conceptual Hydrocalc/EIR/Project Condor Existing Drainage Area Report.pdf
Version: HydroCalc 1.0.2

Input Parameters

Project Name	Project Condor
Subarea ID	1
Area (ac)	10.7
Flow Path Length (ft)	965.0
Flow Path Slope (vft/hft)	0.004
50-yr Rainfall Depth (in)	5.15
Percent Impervious	0.22
Soil Type	16
Design Storm Frequency	25-yr
Fire Factor	0
LID	False

Output Results

Modeled (25-yr) Rainfall Depth (in)	4.5217
Peak Intensity (in/hr)	1.5178
Undeveloped Runoff Coefficient (Cu)	0.6806
Developed Runoff Coefficient (Cd)	0.7289
Time of Concentration (min)	17.0
Clear Peak Flow Rate (cfs)	11.8372
Burned Peak Flow Rate (cfs)	11.8372
24-Hr Clear Runoff Volume (ac-ft)	1.3194
24-Hr Clear Runoff Volume (cu-ft)	57473.0735



Peak Flow Hydrologic Analysis

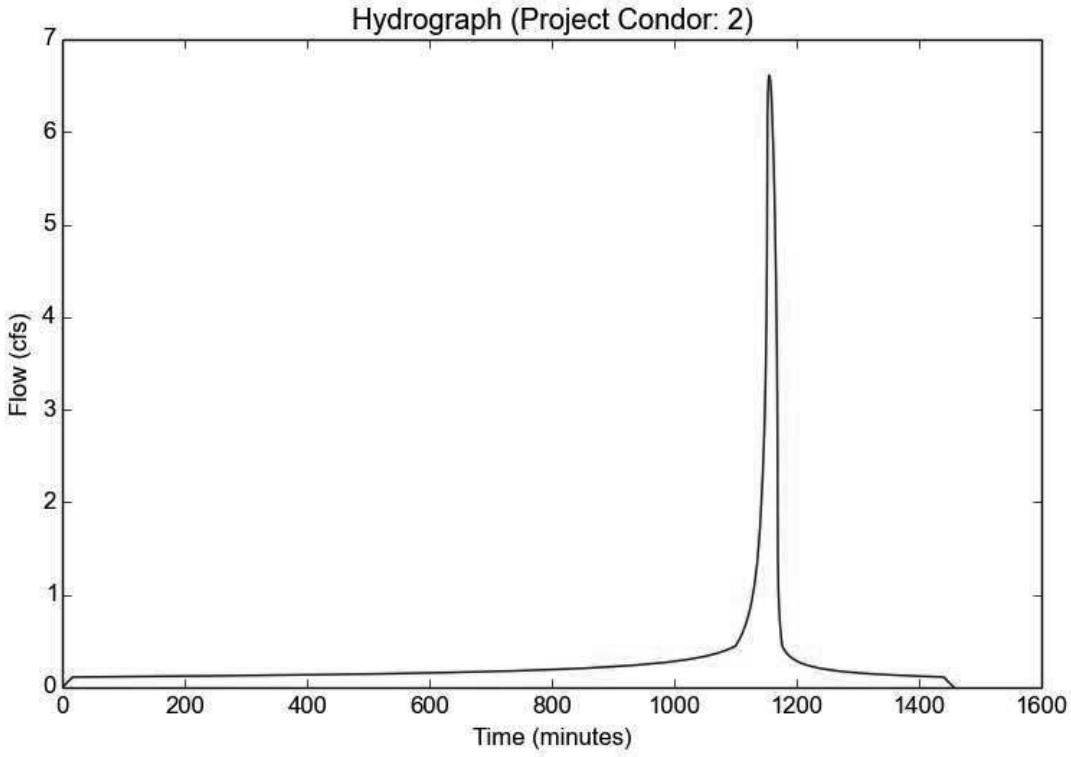
File location: M:/17001/Eng/17001/Hm/Hydrology/Conceptual Hydrocalc/EIR/Project Condor Existing Drainage Area Report.pdf
Version: HydroCalc 1.0.2

Input Parameters

Project Name	Project Condor
Subarea ID	2
Area (ac)	6.2
Flow Path Length (ft)	910.0
Flow Path Slope (vft/hft)	0.004
50-yr Rainfall Depth (in)	5.15
Percent Impervious	0.1
Soil Type	16
Design Storm Frequency	25-yr
Fire Factor	0
LID	False

Output Results

Modeled (25-yr) Rainfall Depth (in)	4.5217
Peak Intensity (in/hr)	1.5178
Undeveloped Runoff Coefficient (Cu)	0.6806
Developed Runoff Coefficient (Cd)	0.7026
Time of Concentration (min)	17.0
Clear Peak Flow Rate (cfs)	6.6112
Burned Peak Flow Rate (cfs)	6.6112
24-Hr Clear Runoff Volume (ac-ft)	0.5613
24-Hr Clear Runoff Volume (cu-ft)	24451.3721



Peak Flow Hydrologic Analysis

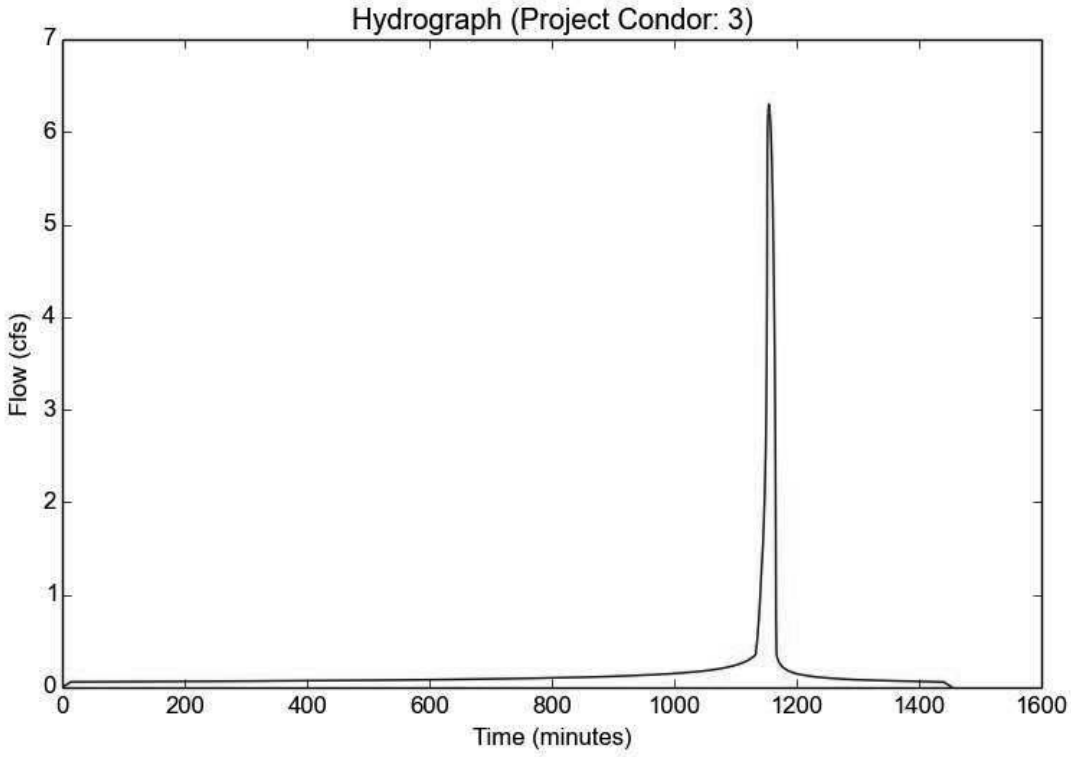
File location: M:/17001/Eng/17001/Hm/Hydrology/Conceptual Hydrocalc/EIR/Project Condor Existing Drainage Area Report.pdf
Version: HydroCalc 1.0.2

Input Parameters

Project Name	Project Condor
Subarea ID	3
Area (ac)	5.1
Flow Path Length (ft)	685.0
Flow Path Slope (vft/hft)	0.004
50-yr Rainfall Depth (in)	5.15
Percent Impervious	0.02
Soil Type	13
Design Storm Frequency	25-yr
Fire Factor	0
LID	False

Output Results

Modeled (25-yr) Rainfall Depth (in)	4.5217
Peak Intensity (in/hr)	1.6628
Undeveloped Runoff Coefficient (Cu)	0.7394
Developed Runoff Coefficient (Cd)	0.7426
Time of Concentration (min)	14.0
Clear Peak Flow Rate (cfs)	6.2979
Burned Peak Flow Rate (cfs)	6.2979
24-Hr Clear Runoff Volume (ac-ft)	0.3313
24-Hr Clear Runoff Volume (cu-ft)	14431.2809



Peak Flow Hydrologic Analysis

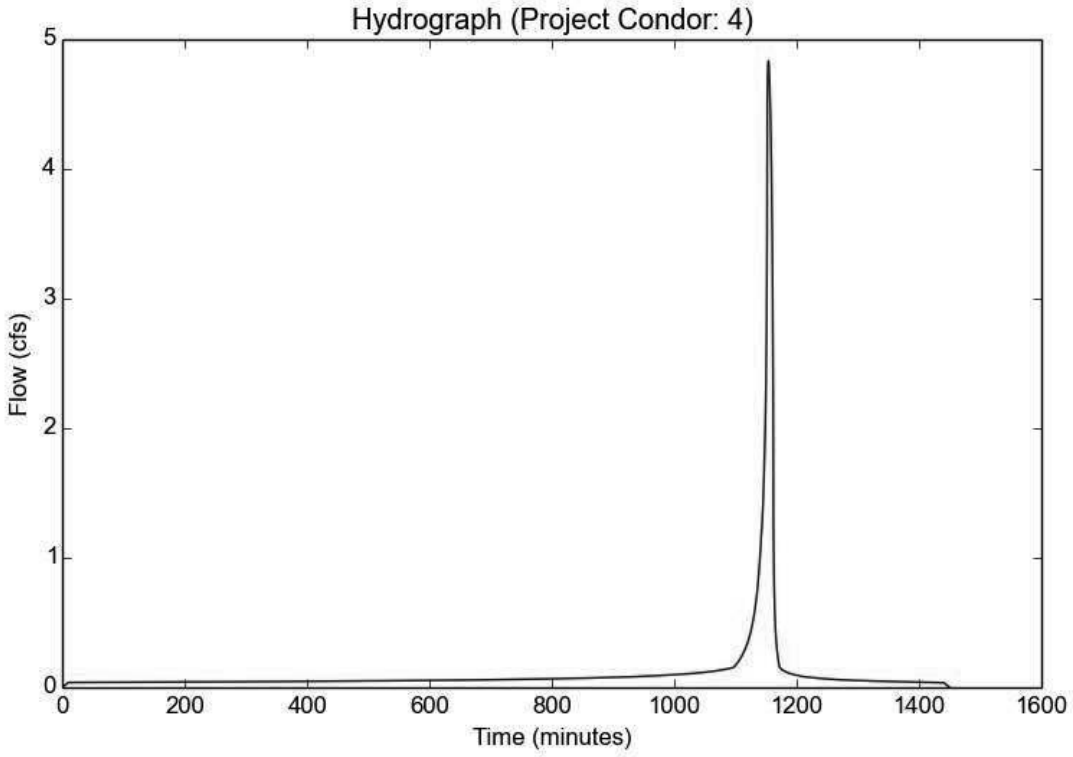
File location: M:/17001/Eng/17001/Hm/Hydrology/Conceptual Hydrocalc/EIR/Project Condor Existing Drainage Area Report.pdf
Version: HydroCalc 1.0.2

Input Parameters

Project Name	Project Condor
Subarea ID	4
Area (ac)	3.3
Flow Path Length (ft)	427.0
Flow Path Slope (vft/hft)	0.0047
50-yr Rainfall Depth (in)	5.15
Percent Impervious	0.02
Soil Type	16
Design Storm Frequency	25-yr
Fire Factor	0
LID	False

Output Results

Modeled (25-yr) Rainfall Depth (in)	4.5217
Peak Intensity (in/hr)	1.9477
Undeveloped Runoff Coefficient (Cu)	0.749
Developed Runoff Coefficient (Cd)	0.752
Time of Concentration (min)	10.0
Clear Peak Flow Rate (cfs)	4.8336
Burned Peak Flow Rate (cfs)	4.8336
24-Hr Clear Runoff Volume (ac-ft)	0.2283
24-Hr Clear Runoff Volume (cu-ft)	9945.7762



Peak Flow Hydrologic Analysis

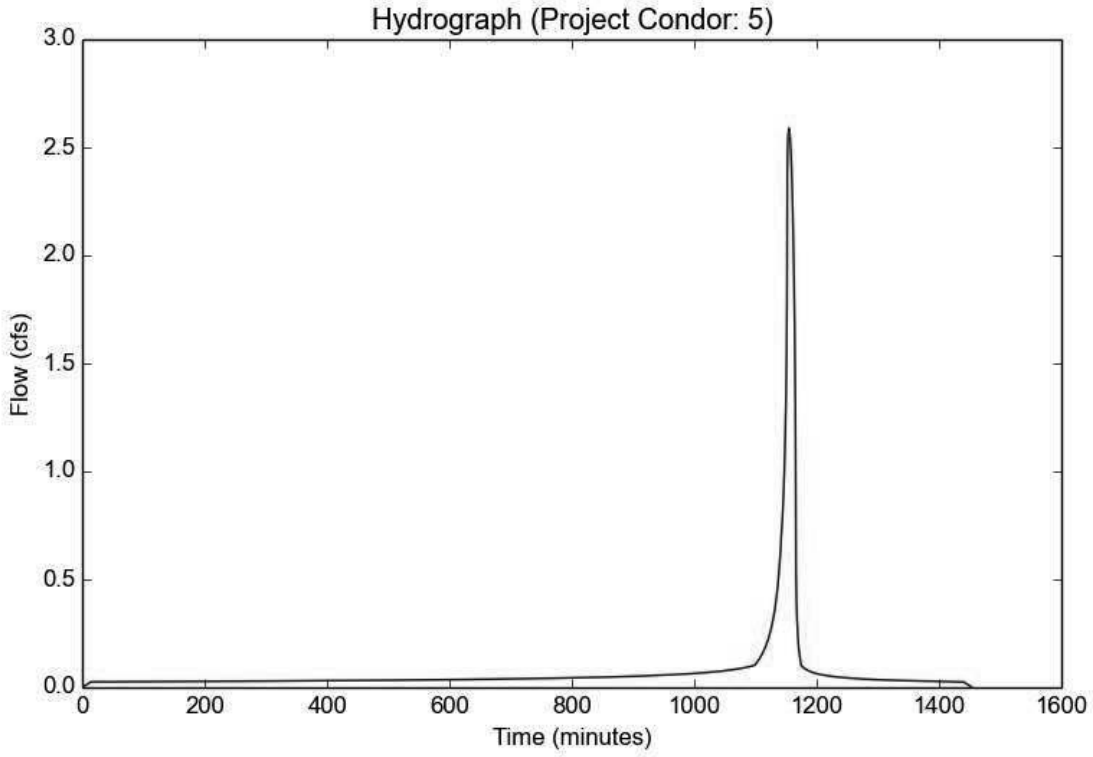
File location: M:/17001/Eng/17001/Hm/Hydrology/Conceptual Hydrocalc/EIR/Project Condor Existing Drainage Area Report.pdf
Version: HydroCalc 1.0.2

Input Parameters

Project Name	Project Condor
Subarea ID	5
Area (ac)	2.2
Flow Path Length (ft)	600.0
Flow Path Slope (vft/hft)	0.003
50-yr Rainfall Depth (in)	5.15
Percent Impervious	0.02
Soil Type	16
Design Storm Frequency	25-yr
Fire Factor	0
LID	False

Output Results

Modeled (25-yr) Rainfall Depth (in)	4.5217
Peak Intensity (in/hr)	1.6628
Undeveloped Runoff Coefficient (Cu)	0.7037
Developed Runoff Coefficient (Cd)	0.7076
Time of Concentration (min)	14.0
Clear Peak Flow Rate (cfs)	2.5886
Burned Peak Flow Rate (cfs)	2.5886
24-Hr Clear Runoff Volume (ac-ft)	0.1516
24-Hr Clear Runoff Volume (cu-ft)	6601.9462



Appendix D

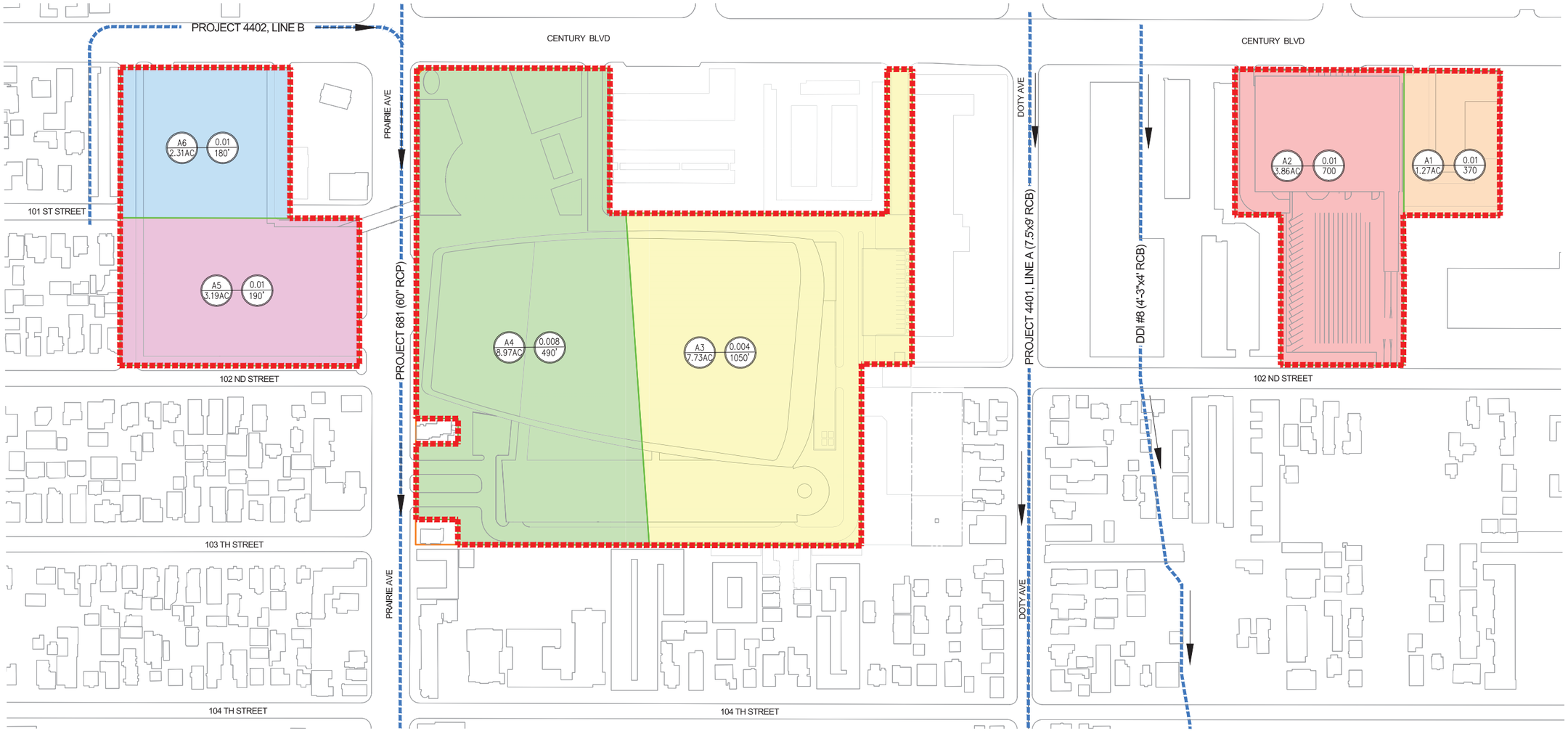
Post-Development Runoff Calculations and Basin Routing

Figure 4 — Post-Development Hydrology Map

Figure 5 — Proposed Onsite Runoff Distribution to Existing Storm Drain Lines

Sub-Areas HydroCalc Worksheets

Summary of Post-Development Runoff Distribution to Existing Storm Drain Systems



SUBAREA	ACREAGE [AC.]	LENGTH [FT.]	SLOPE	Q_{100}
A1	1.3	370'	0.010	3.22 cfs
A2	3.9	700'	0.010	8.07 cfs
A3	7.7	1050'	0.004	13.06 cfs
A4	9.0	490'	0.008	19.79 cfs
A5	3.2	190'	0.010	8.78 cfs
A6	2.3	180'	0.010	6.36 cfs
TOTAL	27.4	---	---	59.28 cfs

LEGEND

- PROJECT STUDY LIMITS
- EXISTING STORM DRAIN LINES
- DRAINAGE AREA
- AREA (ACRES) / SLOPE (LENGTH)

80 0 80 160
scale 1" = 80' feet

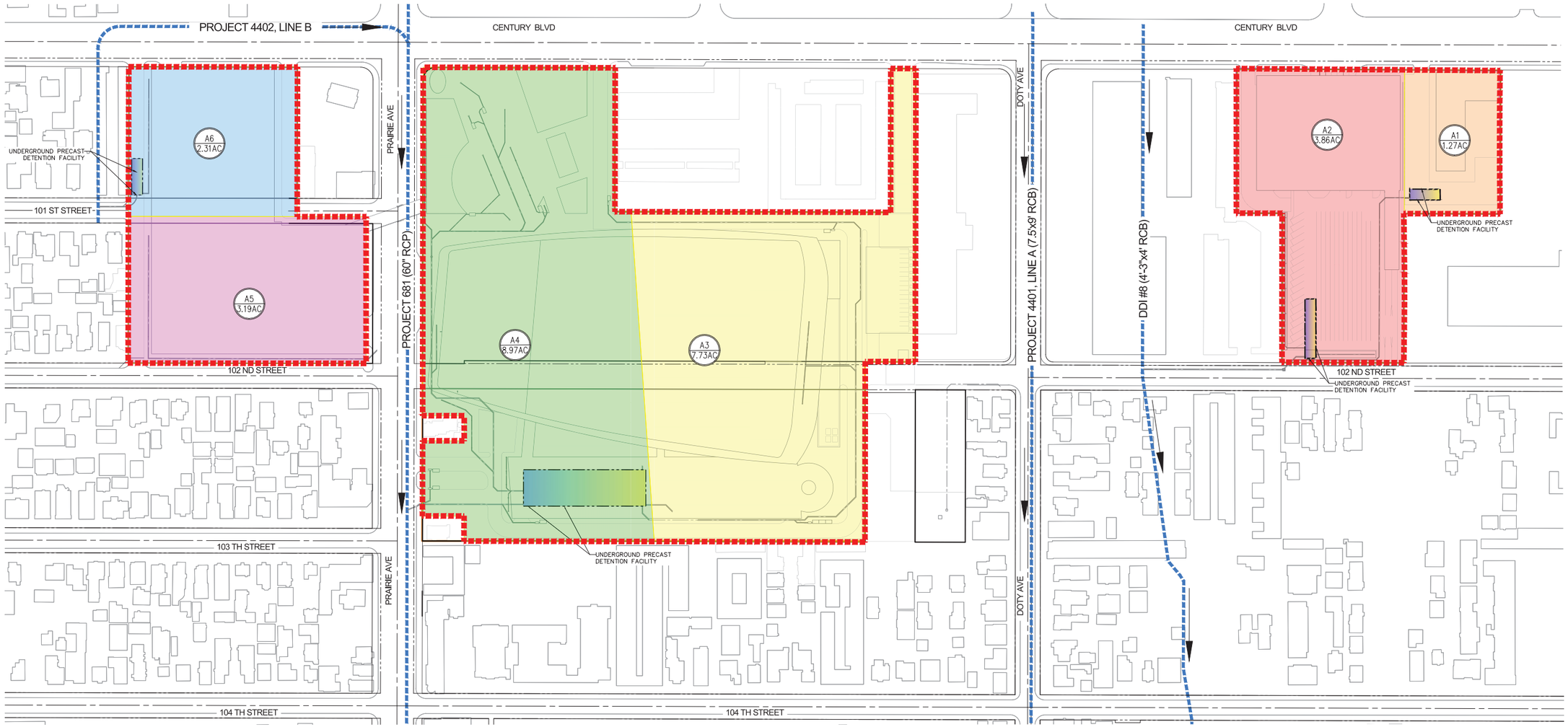
FIGURE 4

D & D ENGINEERING, INC.
8901 S. LA CIENEGA BLVD, SUITE 106
INGLEWOOD, CA 90301
Phone: 424-351-6800

INGLEWOOD BASKETBALL AND ENTERTAINMENT CENTER

POST-DEVELOPMENT HYDROLOGY MAP

SCALE: 1" = 80'
DATE: 04/29/19
SHT NO.: 1 OF 1



SUBAREA	ACREAGE [AC.]	LENGTH [FT.]	SLOPE	Q_{50}
A1	1.3	370'	0.010	3.22 cfs
A2	3.9	700'	0.010	8.07 cfs
A3	7.7	1050'	0.004	13.06 cfs
A4	9.0	490'	0.008	19.79 cfs
A5	3.2	190'	0.010	8.78 cfs
A6	2.3	180'	0.010	6.36 cfs
TOTAL	27.4	---	---	59.28 cfs

EXISTING STORM DRAIN LINE	CONTRIBUTING ON-SITE DRAINAGE AREA	ALLOWABLE DISCHARGE TO EXISTING LINE [CFS/AC.]	TOTAL ALLOWABLE DISCHARGE TO EXISTING LINE [CFS]	PROPOSED Q_{50} FLOW [CFS]	REQUIRED FLOW TO BE MITIGATED WITH STORAGE [CFS]	STORAGE PROVIDED [CF]	OUTFLOW [CFS]	NOTE
PROJECT DDI #8	A1 & A2	1.00	5.13	11.29	6.16	8900	5.11	SUFFICIENT SD CAPACITY
PROJECT 4402 LINE C	A6	1.00	2.31	6.36	4.05	5300	1.96	SUFFICIENT SD CAPACITY
PROJECT 681	A3, A4 & A5	0.72	14.32	41.63	27.31	100800	14.30	SUFFICIENT SD CAPACITY

* TOTAL RUNOFF FROM DRAINAGE AREAS A3 & A4 DETENTION FACILITY OUTFALL OF 5.52 CFS AND DRAINAGE AREA A5 RUNOFF OF 8.78 CFS.

LEGEND

- PROJECT STUDY LIMITS
- EXISTING STORM DRAIN LINES
- DRAINAGE SUB-AREA
- (AREA / ACRES) (SLOPE / LENGTH)

80 0 80 160
scale 1" = 80' feet

FIGURE 5

D & D ENGINEERING, INC.
8901 S. LA CIENEGA BLVD, SUITE 106
INGLEWOOD, CA 90301
Phone: 424-351-6800

INGLEWOOD BASKETBALL AND ENTERTAINMENT CENTER

PROPOSED ONSITE RUNOFF DISTRIBUTION TO EXISTING STORM DRAIN LINES

SCALE: 1" = 80'
DATE: 04/29/19
SHT NO.: 1 OF 1

Peak Flow Hydrologic Analysis

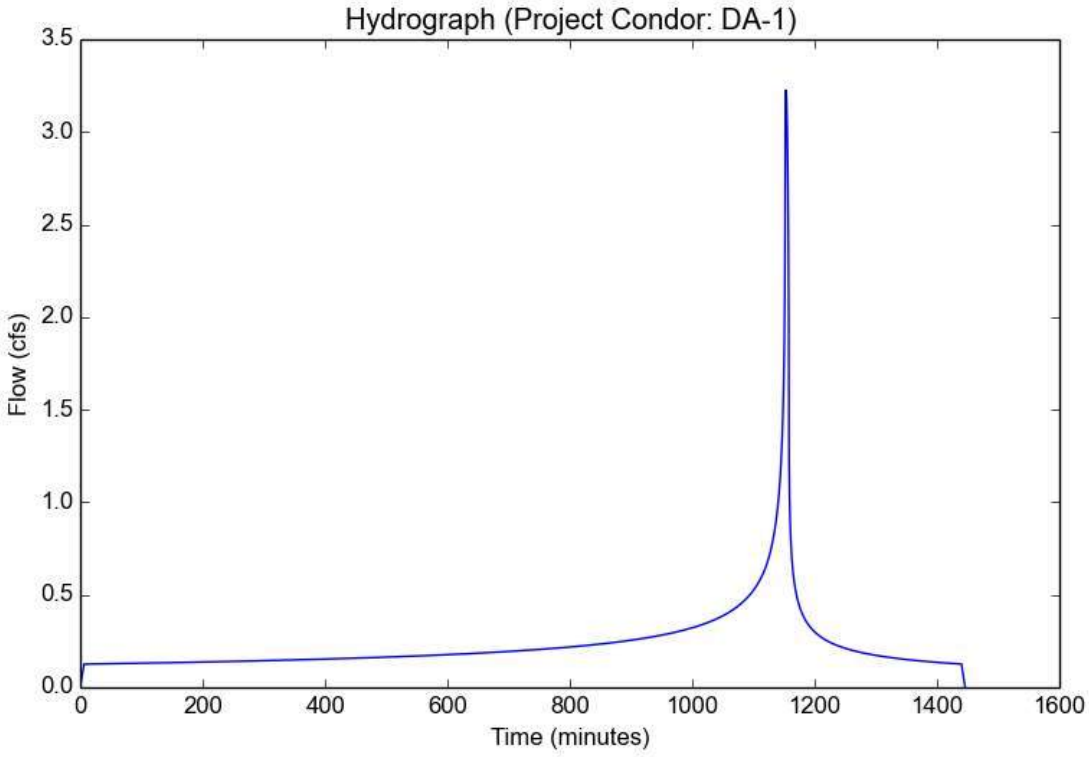
File location: M:/17001/Admin/17001-100/Reports/03_Third round fo the reports March 2019/Hydrology/Calculations/Project Condor Proposed Drainage
Version: HydroCalc 1.0.2

Input Parameters

Project Name	Project Condor
Subarea ID	DA-1
Area (ac)	1.27
Flow Path Length (ft)	370.0
Flow Path Slope (vft/hft)	0.01
50-yr Rainfall Depth (in)	5.15
Percent Impervious	0.96
Soil Type	13
Design Storm Frequency	50-yr
Fire Factor	0
LID	False

Output Results

Modeled (50-yr) Rainfall Depth (in)	5.15
Peak Intensity (in/hr)	2.8203
Undeveloped Runoff Coefficient (Cu)	0.9139
Developed Runoff Coefficient (Cd)	0.9
Time of Concentration (min)	6.0
Clear Peak Flow Rate (cfs)	3.2236
Burned Peak Flow Rate (cfs)	3.2236
24-Hr Clear Runoff Volume (ac-ft)	0.4707
24-Hr Clear Runoff Volume (cu-ft)	20505.3648



Peak Flow Hydrologic Analysis

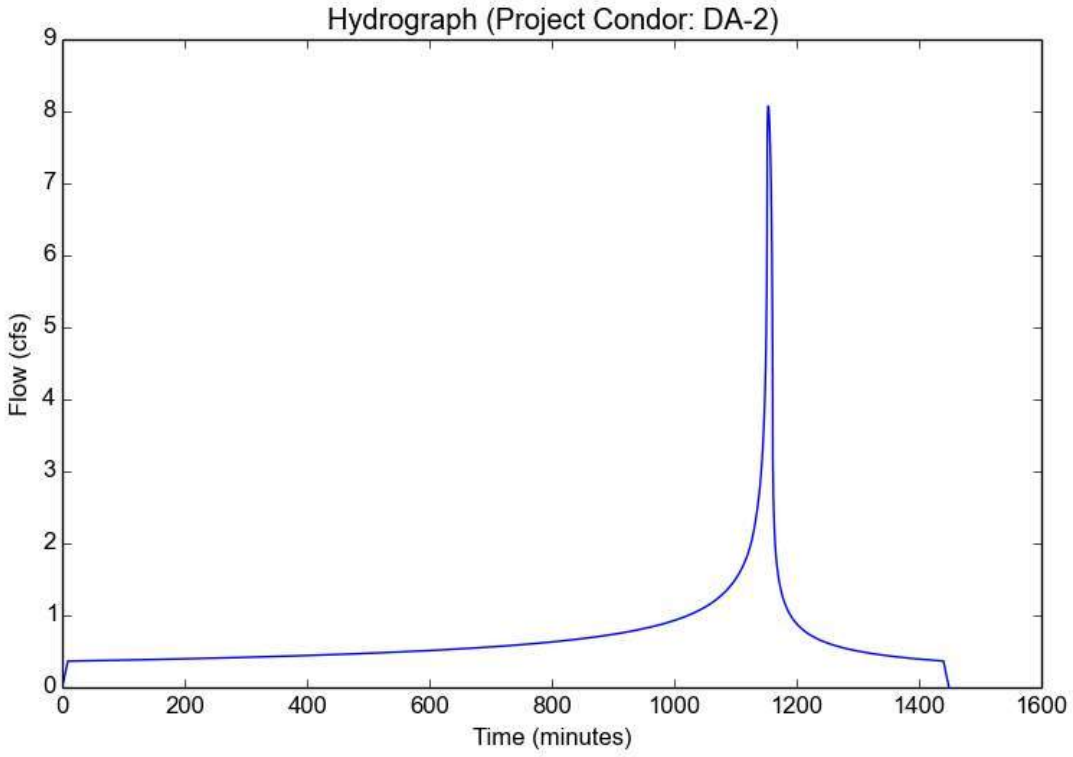
File location: M:/17001/Admin/17001-100/Reports/03_Third round fo the reports March 2019/Hydrology/Calculations/Project Condor Proposed Drainage
Version: HydroCalc 1.0.2

Input Parameters

Project Name	Project Condor
Subarea ID	DA-2
Area (ac)	3.86
Flow Path Length (ft)	700.0
Flow Path Slope (vft/hft)	0.01
50-yr Rainfall Depth (in)	5.15
Percent Impervious	0.91
Soil Type	13
Design Storm Frequency	50-yr
Fire Factor	0
LID	False

Output Results

Modeled (50-yr) Rainfall Depth (in)	5.15
Peak Intensity (in/hr)	2.3309
Undeveloped Runoff Coefficient (Cu)	0.8687
Developed Runoff Coefficient (Cd)	0.8972
Time of Concentration (min)	9.0
Clear Peak Flow Rate (cfs)	8.0724
Burned Peak Flow Rate (cfs)	8.0724
24-Hr Clear Runoff Volume (ac-ft)	1.3709
24-Hr Clear Runoff Volume (cu-ft)	59716.2134



Peak Flow Hydrologic Analysis

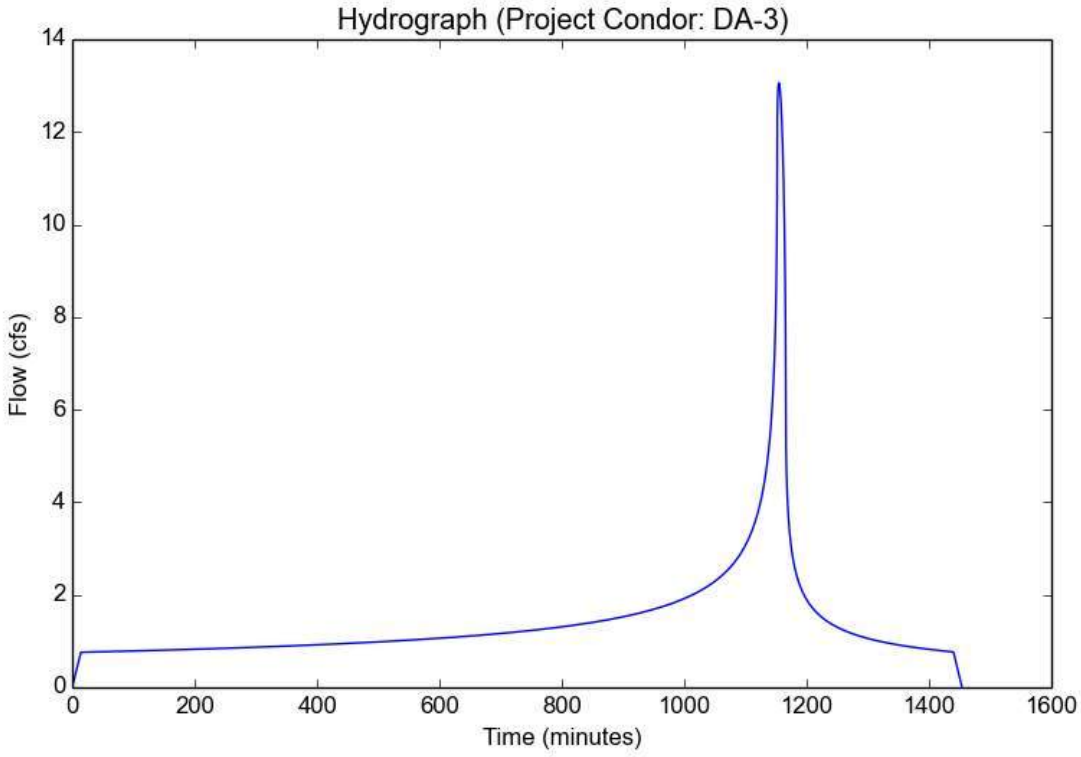
File location: M:/17001/Admin/17001-100/Reports/03_Third round fo the reports March 2019/Hydrology/Calculations/Project Condor Proposed Drainage
Version: HydroCalc 1.0.2

Input Parameters

Project Name	Project Condor
Subarea ID	DA-3
Area (ac)	7.73
Flow Path Length (ft)	1050.0
Flow Path Slope (vft/hft)	0.004
50-yr Rainfall Depth (in)	5.15
Percent Impervious	0.95
Soil Type	16
Design Storm Frequency	50-yr
Fire Factor	0
LID	False

Output Results

Modeled (50-yr) Rainfall Depth (in)	5.15
Peak Intensity (in/hr)	1.8939
Undeveloped Runoff Coefficient (Cu)	0.7404
Developed Runoff Coefficient (Cd)	0.892
Time of Concentration (min)	14.0
Clear Peak Flow Rate (cfs)	13.0587
Burned Peak Flow Rate (cfs)	13.0587
24-Hr Clear Runoff Volume (ac-ft)	2.8429
24-Hr Clear Runoff Volume (cu-ft)	123834.7286



Peak Flow Hydrologic Analysis

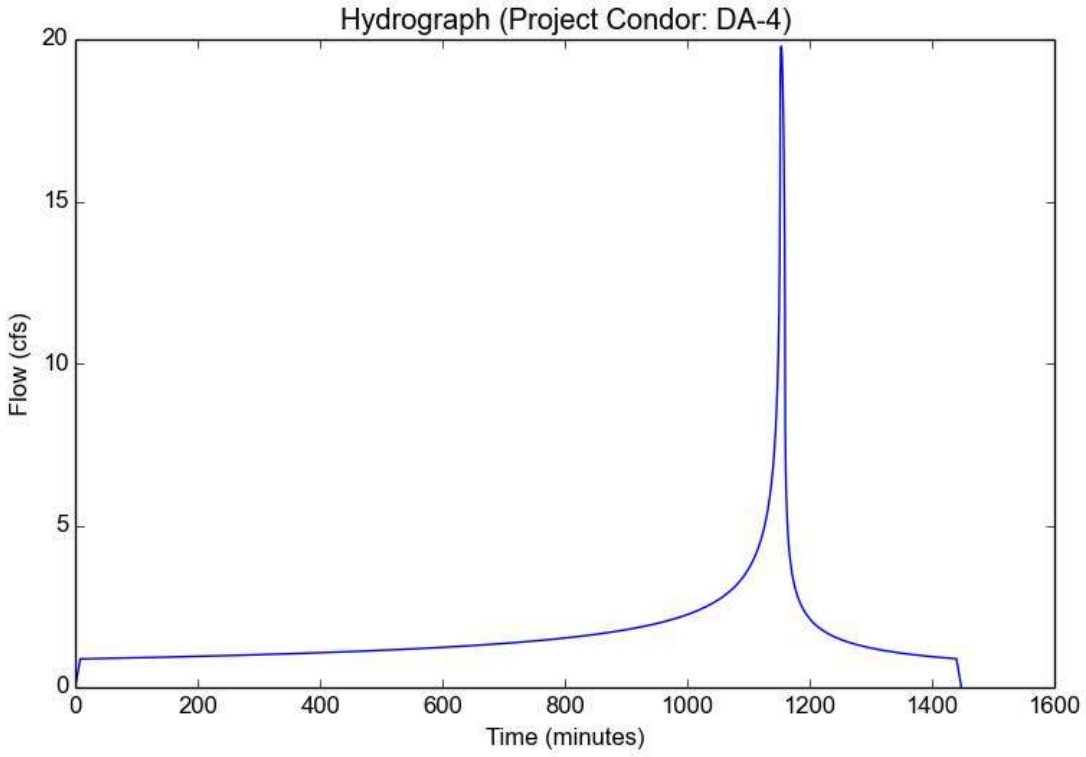
File location: M:/17001/Admin/17001-100/Reports/03_Third round fo the reports March 2019/Hydrology/Calculations/Project Condor Proposed Drainage
Version: HydroCalc 1.0.2

Input Parameters

Project Name	Project Condor
Subarea ID	DA-4
Area (ac)	8.97
Flow Path Length (ft)	490.0
Flow Path Slope (vft/hft)	0.008
50-yr Rainfall Depth (in)	5.15
Percent Impervious	0.95
Soil Type	16
Design Storm Frequency	50-yr
Fire Factor	0
LID	False

Output Results

Modeled (50-yr) Rainfall Depth (in)	5.15
Peak Intensity (in/hr)	2.4636
Undeveloped Runoff Coefficient (Cu)	0.8069
Developed Runoff Coefficient (Cd)	0.8953
Time of Concentration (min)	8.0
Clear Peak Flow Rate (cfs)	19.7859
Burned Peak Flow Rate (cfs)	19.7859
24-Hr Clear Runoff Volume (ac-ft)	3.2991
24-Hr Clear Runoff Volume (cu-ft)	143708.9552



Peak Flow Hydrologic Analysis

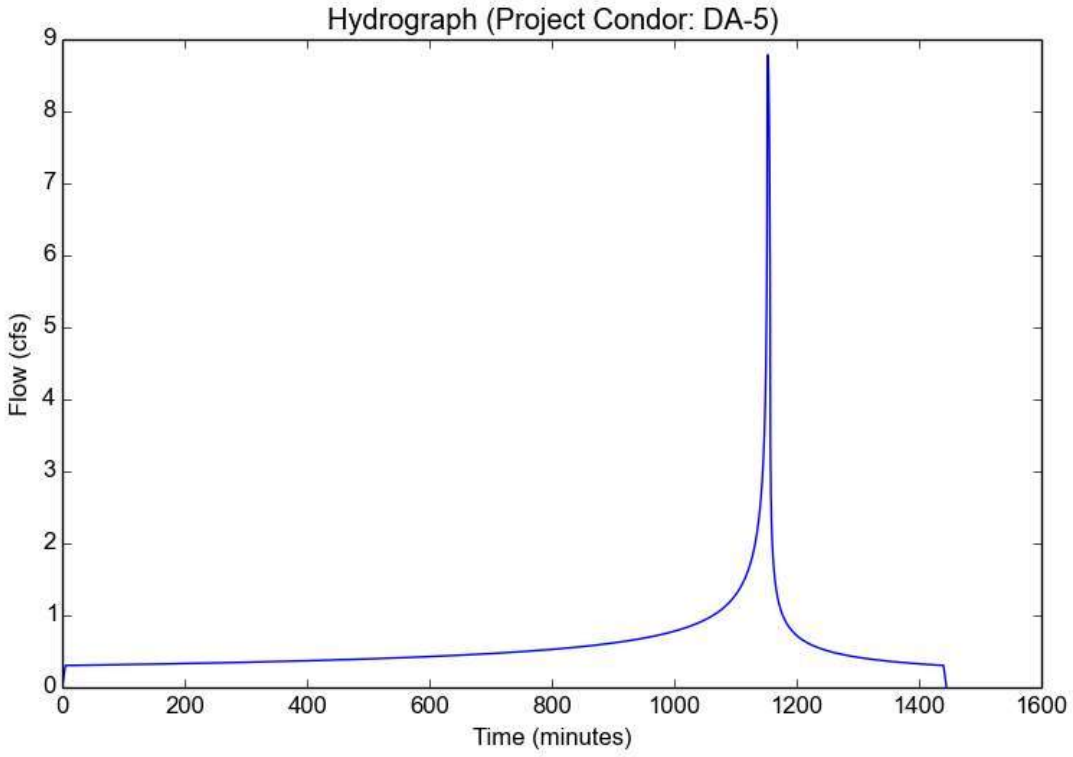
File location: M:/17001/Admin/17001-100/Reports/03_Third round fo the reports March 2019/Hydrology/Calculations/Project Condor Proposed Drainage
Version: HydroCalc 1.0.2

Input Parameters

Project Name	Project Condor
Subarea ID	DA-5
Area (ac)	3.19
Flow Path Length (ft)	190.0
Flow Path Slope (vft/hft)	0.01
50-yr Rainfall Depth (in)	5.15
Percent Impervious	0.92
Soil Type	16
Design Storm Frequency	50-yr
Fire Factor	0
LID	False

Output Results

Modeled (50-yr) Rainfall Depth (in)	5.15
Peak Intensity (in/hr)	3.0726
Undeveloped Runoff Coefficient (Cu)	0.8531
Developed Runoff Coefficient (Cd)	0.8962
Time of Concentration (min)	5.0
Clear Peak Flow Rate (cfs)	8.7848
Burned Peak Flow Rate (cfs)	8.7848
24-Hr Clear Runoff Volume (ac-ft)	1.1441
24-Hr Clear Runoff Volume (cu-ft)	49837.1138



Peak Flow Hydrologic Analysis

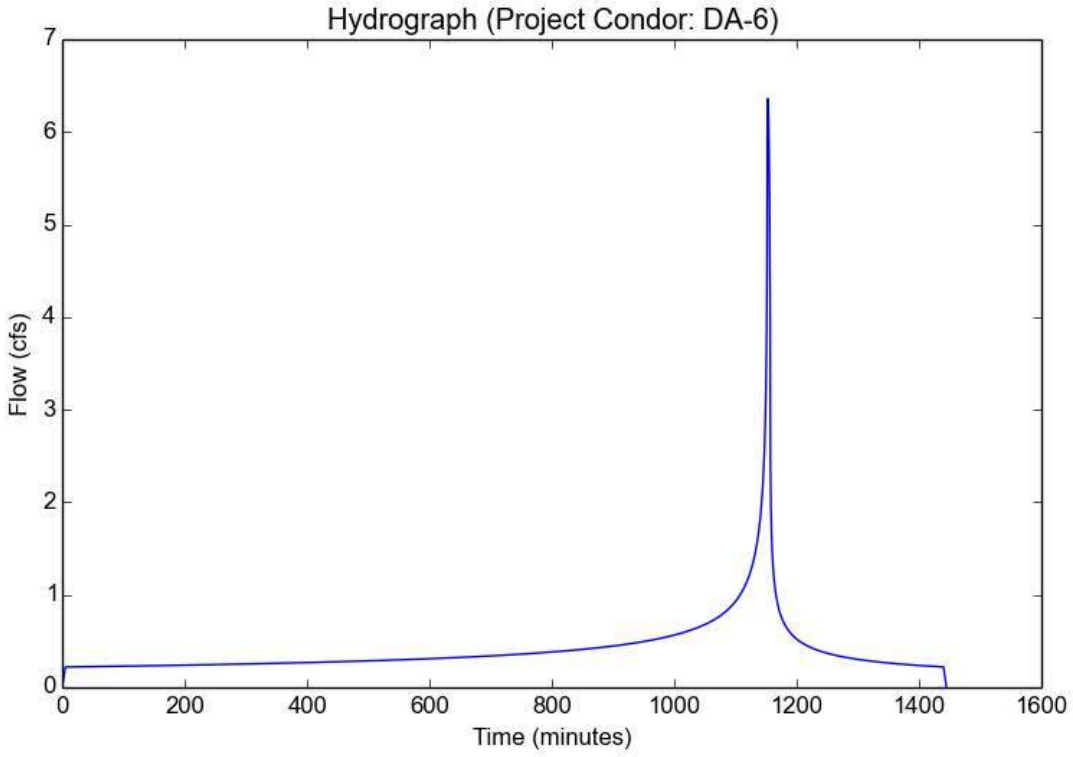
File location: M:/17001/Admin/17001-100/Reports/03_Third round fo the reports March 2019/Hydrology/Calculations/Project Condor Proposed Drainage
Version: HydroCalc 1.0.2

Input Parameters

Project Name	Project Condor
Subarea ID	DA-6
Area (ac)	2.31
Flow Path Length (ft)	180.0
Flow Path Slope (vft/hft)	0.01
50-yr Rainfall Depth (in)	5.15
Percent Impervious	0.92
Soil Type	16
Design Storm Frequency	50-yr
Fire Factor	0
LID	False

Output Results

Modeled (50-yr) Rainfall Depth (in)	5.15
Peak Intensity (in/hr)	3.0726
Undeveloped Runoff Coefficient (Cu)	0.8531
Developed Runoff Coefficient (Cd)	0.8962
Time of Concentration (min)	5.0
Clear Peak Flow Rate (cfs)	6.3614
Burned Peak Flow Rate (cfs)	6.3614
24-Hr Clear Runoff Volume (ac-ft)	0.8285
24-Hr Clear Runoff Volume (cu-ft)	36088.9445



EXISTING STORM DRAIN LINE	CONTRIBUTING ON-SITE DRAINAGE AREA	ALLOWABLE DISCHARGE TO EXISTING LINE [CFS/AC.]	TOTAL ALLOWABLE DISCHARGE TO EXISTING LINE [CFS]	PROPOSED Q_{50} FLOW [CFS]	REQUIRED FLOW TO BE MITIGATED WITH STORAGE [CFS]	STORAGE PROVIDED [CF]	OUTFLOW [CFS]	NOTE
PROJECT DDI #8	A1 & A2	1.00	5.13	11.29	6.16	8900	5.11	SUFFICIENT SD CAPACITY
PROJECT 4402 LINE C	A6	1.00	2.31	6.36	4.05	5300	1.96	SUFFICIENT SD CAPACITY
PROJECT 681	A3, A4 & A5	0.72	14.32	41.63	27.31	100800	14.30	SUFFICIENT SD CAPACITY

* TOTAL RUNOFF FROM DRAINAGE AREAS A3 & A4 DETENTION FACILITY OUTFALL OF 5.52 CFS AND DRAINAGE AREA A5 RUNOFF OF 8.78 CFS.

Appendix E

LA County As-Built Plans

LACDPW Project 4402 & 681 As Built Plans

LACDPW Project 4401, Line A As Built Plans

LACDPW DDI # 8 As Built Plans

LEGEND & ABBREVIATIONS

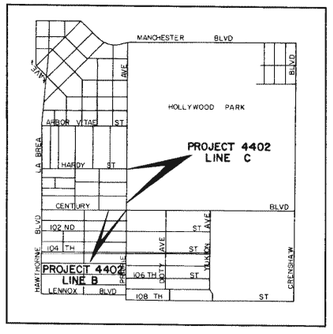
PROPERTY LINE	
CURB	
GUTTER	
SIDE INLET CATCH BASIN	
EXISTING DRAINAGE STRUCTURES	
GRATING TYPE CATCH BASIN	
DRIVEWAY	
LIMIT OF CONCRETE SURFACE	
WALK	
TRAFFIC SIGNAL	
DEAD MAN	
POWER, TELEPHONE OR GUY POLE	
FIRE HYDRANT	
ELECTROLIER	
WATER & GAS METER	
BENCH MARK	
TEST BORING	
TREE	
TREES TO BE REPLACED BY CONTRACTOR	
UNDER EXISTING UTILITY	Ⓐ
OVER EXISTING UTILITY	Ⓐ
TRAFFIC SIGNAL CONDUIT	T.S.C.
TRANSITION STRUCTURE	T. S.
MANHOLE	M.H.
LOCAL DEPRESSION	L.D.
REINFORCED CONCRETE PIPE	R.C.P.
TEST BORING	T.B.
JUNCTION STRUCTURE	J.S.
CATCH BASIN	C.B.
SANITARY SEWER	S.S.
TEMPORARY BENCH MARKS	T.B.M.
SOUTHERN CALIFORNIA GAS CO.	S.C.G.
L.A. DEPT. OF WATER & POWER WATER SYST.	DW&P WS
SOUTHERN CALIFORNIA WATER CO.	S.C.W.
INGLEWOOD CITY WATER DEPT.	ING. W.
SOUTHERN CALIFORNIA EDISON CO.	S.C.E.
PACIFIC TELEPHONE & TELEGRAPH CO.	P.T. &T.

LOS ANGELES COUNTY ROAD DEPARTMENT STANDARD DRAWINGS

DRAWING NO.	TITLE
M57-39R	PARTIAL CONCRETE REPLACEMENT FOR CROSS GUTTERS AND SPANDRELS
M57-45R	SPECIFICATIONS FOR REPAIRS OF CUTS IN CONCRETE PAVEMENT

LOS ANGELES COUNTY FLOOD CONTROL DISTRICT STANDARD DRAWINGS

DRAWING NO.	TITLE
2-D88	LOCAL DEPRESSION NO. 2
2-D96	STANDARD DROP STEP
2-D107	CONCRETE RINGS, REDUCER AND PIPE
2-D193	JUNCTION STRUCTURE NO. 4
2-D156	MANHOLE FRAME AND COVER FOR CATCH BASINS
2-D163	CATCH BASIN NO. 3 (W=10';14';21';28';ETC.)
2-D172	CATCH BASIN REINFORCEMENT
2-D173.1 TO .3	PIPE SUPPORTS ACROSS TRENCHES
2-D175	REMOVABLE PROTECTION BAR FOR CATCH BASINS
2-D177	PIPE BEDDING IN TRENCHES
2-D181	STANDARD NON-ROCKING MANHOLE FRAME AND COVER
2-D184	MANHOLE NO. 2 (PIPES, 36" OR LARGER)
2-D213.1 & .2	"D" LOAD TABLE FOR DESIGN OF REINFORCED CONCRETE PIPE
2-D171	STANDARD A-305 REINFORCING BARS
2-D232	DETAIL OF CATCH BASIN OPENING
2-D250	REMODELING OF SANITARY SEWER HOUSE CONNECTIONS
2-D251	PROTECTION FOR MAIN LINE AND HOUSE CONNECTION SEWERS
2-D109	CATCH BASIN NO. 6
2-D224	CONNECTION TO CATCH BASIN FOR PIPES 12" THROUGH 72"
2-D227	FRAME AND GRATING FOR CATCH BASINS
2-D264	ADJUSTABLE PROTECTION BAR STIRRUP
2-D393	CONCRETE COLLAR FOR PIPES 12" THROUGH 66"
2-D413	UNIFIED SOIL CLASSIFICATION SYSTEM
2-D170	CATCH BASIN NO. 7
2-D399	CRITERIA FOR THE DESIGN OF SHORING FOR EXCAVATIONS
2-D400	SAMPLE SHEET FOR USE AS A GUIDE IN PREPARING CALCULATIONS FOR SHORING OF EXCAVATIONS
2-D113	MANHOLE NO. 4
2-D112	JUNCTION STRUCTURE NO. 2
2-D160	CATCH BASIN NO. 1



VICINITY MAP

1000 0 1000 2000 3000 4000

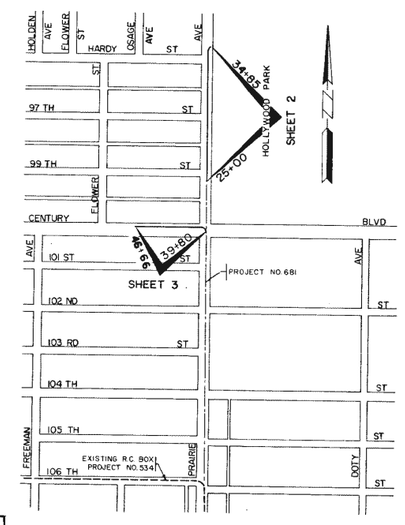
GRAPHIC SCALE

GENERAL NOTES

1. NUMBERS IN CIRCLES INDICATE ITEMS UNDER WHICH PAYMENT WILL BE MADE.
2. ELEVATIONS SHOWN ARE IN FEET ABOVE THE U.S.G.S. MEAN SEA LEVEL DATUM.
3. STATIONS SHOWN ON DRAWINGS ARE ALONG CENTER LINE OF CONDUIT OR ON A LINE NORMAL TO CENTER LINE OF CONDUIT.
4. STATIONS AND INVERT ELEVATIONS OF PIPE INLETS SHOWN ON THE PROFILES ARE AT THE INSIDE FACE OF THE CONDUIT, UNLESS OTHERWISE SHOWN.
5. ALL FIELD BOOK REFERENCES ARE TO CITY OF INGLEWOOD FIELD BOOKS, UNLESS OTHERWISE NOTED.
6. ALL PIPE IN OPEN TRENCH SHALL BE BEDDED ACCORDING TO STANDARD DRAWING 2-D177, CASE III, UNLESS OTHERWISE SHOWN OR MODIFIED IN THE SPECIFICATIONS.
7. PIPE CONNECTIONS TO STORM DRAIN SHALL CONFORM TO STANDARD DRAWING 2-D 193, UNLESS OTHERWISE SHOWN.
8. TIES FOR CATCH BASINS AS SHOWN ON THE DRAWINGS ARE FROM CURB RETURN TO CENTER LINE OF CATCH BASIN, UNLESS OTHERWISE SHOWN.
9. LOCATIONS OF CATCH BASIN CONNECTOR PIPE JUNCTIONS WITH CATCH BASINS AS SHOWN ON THE DRAWINGS ARE SCHEMATIC. IT IS INTENDED THAT SUCH JUNCTIONS BE LOCATED AT THE DOWNSTREAM ENDS OF THE CATCH BASINS, UNLESS OTHERWISE SHOWN. IN ALL CASES THE EXACT LOCATIONS WILL BE DETERMINED IN THE FIELD BY THE ENGINEER TO MEET FIELD CONDITIONS.
10. MONOLITHIC CATCH BASIN CONNECTIONS SHALL BE CONSTRUCTED, WHERE APPLICABLE, PER STANDARD DRAWING 2-D 224.
11. "V_i" IS THE DEPTH OF INLET OF CATCH BASINS IN SERIES MEASURED FROM TOP OF CURB TO INVERT OF CONNECTOR PIPE.
12. ALL EXISTING SANITARY SEWERS SHOWN ON THE DRAWINGS ARE CITY OF INGLEWOOD SEWERS.
13. EXISTING UTILITIES SHALL BE MAINTAINED IN PLACE BY THE CONTRACTOR, UNLESS OTHERWISE NOTED.
14. WHERE UTILITIES ARE INDICATED ON THE DRAWINGS TO BE SUPPORTED, SAID SUPPORTS SHALL BE IN ACCORDANCE WITH STANDARD DRAWING 2-D 173.1, .2 OR .3, UNLESS OTHERWISE INDICATED.
15. LOCATIONS SHOWN ON THE PLANS FOR EXISTING SANITARY SEWER HOUSE CONNECTIONS ARE APPROXIMATE ONLY.
16. SANITARY SEWER HOUSE CONNECTION RECONSTRUCTION AND RECONNECTION SHALL BE IN ACCORDANCE WITH STANDARD DRAWING 2-D 250, UNLESS OTHERWISE SHOWN.
17. SANITARY SEWERS AND HOUSE CONNECTIONS CROSSING OVER THE STORM DRAIN TRENCH SHALL BE SUPPORTED IN ACCORDANCE WITH STANDARD DRAWINGS 2-D173.1 TO .3 AND ENCASED PER GENERAL NOTE 1 ON STANDARD DRAWING 2-D 173.1.
18. WHEN INDICATED ON THE DRAWINGS, SANITARY SEWERS AND HOUSE CONNECTIONS SHALL BE ENCASED OR BLANKETED IN ACCORDANCE WITH STANDARD DRAWING 2-D 251.
19. ALL RESURFACING, CURBS, GUTTERS, SIDEWALKS, DRIVEWAYS AND OTHER EXISTING IMPROVEMENTS TO BE RECONSTRUCTED SHALL BE CONSTRUCTED AT THE SAME ELEVATION AND LOCATION AS THE EXISTING IMPROVEMENTS, UNLESS OTHERWISE NOTED.
20. SOIL TEST BORINGS FOR THIS PROJECT WERE MADE 8-26-65 AND 8-27-65
21. THE DEPTH AT THE UPSTREAM END OF CATCH BASINS 10 FEET OR MORE IN LENGTH SHALL BE CURB FACE PLUS 12 INCHES UNLESS OTHERWISE SHOWN.
22. REFER TO SHEET 4 FOR TYPICAL CATCH BASIN CONNECTOR PIPE PROFILE.
23. ALL OPENINGS RESULTING FROM THE CUTTING OR PARTIAL REMOVAL OF EXISTING PIPES, CULVERTS, OR SIMILAR STRUCTURES SHALL BE SEALED WITH 8 INCHES OF BRICK AND MORTAR OR 6 INCHES OF CONCRETE.
24. THE OPENINGS AND TOP SLABS OF ALL SIDE INLET CATCH BASINS AND CATCH BASINS NO. 6 AND 7 SHALL BE MODIFIED TO MEET THE REQUIREMENTS SHOWN ON STANDARD DRAWING 2-D232.
25. WHERE REQUIRED BY STANDARD DRAWING 2-D213.1, CONCRETE BACKFILL SHALL BE USED AROUND CONNECTOR PIPES 36 INCHES OR LESS IN DIAMETER. CONCRETE BACKFILL FOR MAIN LINE PIPE SHALL BE USED ONLY WHEN DIRECTED BY THE ENGINEER.
26. THE OPENING OF ALL SIDE INLET CATCH BASINS AND CATCH BASIN NO 6 THAT HAVE MODIFIED LOCAL DEPRESSIONS TO BE CURB FACE PLUS 1" IN LIEU OF 9".
27. CONSTRUCT LOCAL DEPRESSION PER STANDARD DRAWING 2-D109 AND AS MODIFIED ON THE DRAWINGS FOR CATCH BASIN NO. 6.

INDEX TO DRAWINGS

SHEET NO.	TITLE
1.	LOCATION MAP, GENERAL NOTES, INDEX TO DRAWINGS, STANDARD DRAWINGS, ABBREVIATIONS AND LEGEND.
2.	LINE C, PLAN, PROFILE AND SECTION STA 25+00 TO STA 34+85
3.	LINE B, PLAN, PROFILE AND SECTION STA 39+80 TO STA 46+66
4.	LOG OF BORINGS AND RESURFACING PLAN.



LOCATION MAP

500 0 500 1000 1500

GRAPHIC SCALE

⚠ NOTE CHANGE OF PROJECT LIMITS
Due to bond issue financing requirements, the upstream limit of Project 681, has been changed to Station 14+98. See DWG. NO. 364-681-D23. The downstream limit of Project 4402 Unit I, Line C, has been extended to meet the new upstream limit of Project 681, see DWG NO. 364-4402-D22.

DRAWN BY	REVISIONS		
INGLEWOOD	MARK	DATE	DESCRIPTION
CHECKED BY	⚠	5-4-67	Note Change Of Project Limits
INGLEWOOD			
DESIGNED BY			
INGLEWOOD			
SUBMITTED BY			
C. W. H.			

■ "AS BUILT DWGS."

1964 STORM DRAIN BOND ISSUE

CITY OF INGLEWOOD
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION

SUBMITTED BY:
R. K. Lee
ASSISTANT CITY ENGINEER R.C.E. 13078

APPROVED BY:
Willis L. Harman 12-2-65
CITY ENGINEER R.C.E. 11237 DATE

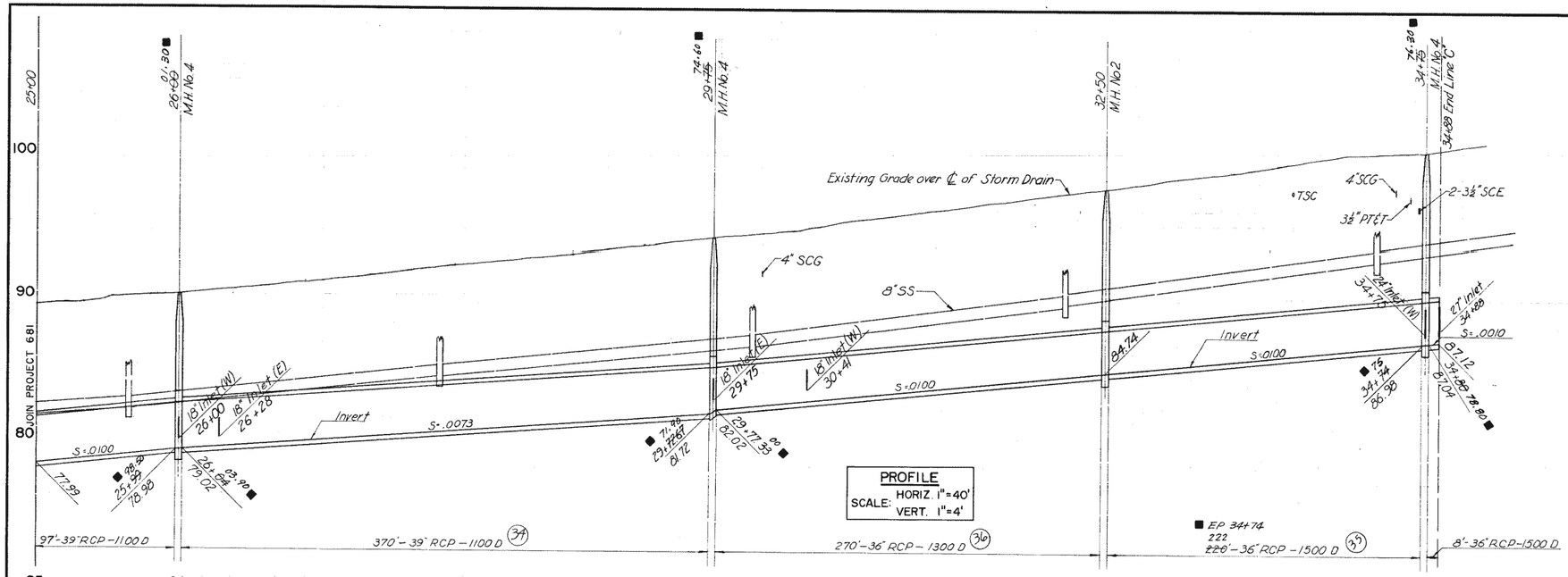
LOS ANGELES COUNTY
FLOOD CONTROL DISTRICT

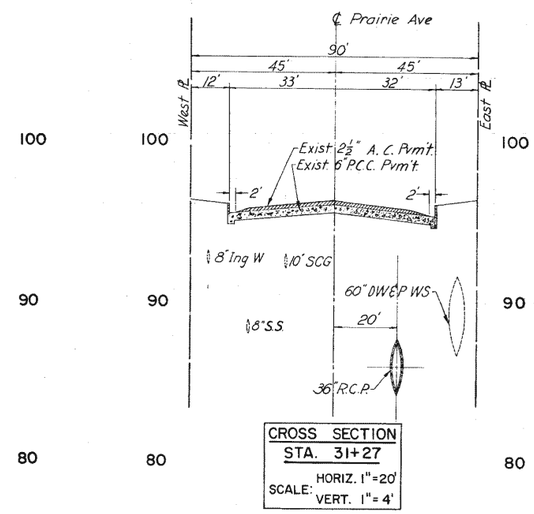
PROJECT NO. 4402, UNIT I
INGLEWOOD
LINE B&C
LOCATION MAP, GENERAL NOTES, INDEX TO DRAWINGS, STANDARD DRAWINGS, LEGEND AND ABBREVIATIONS.

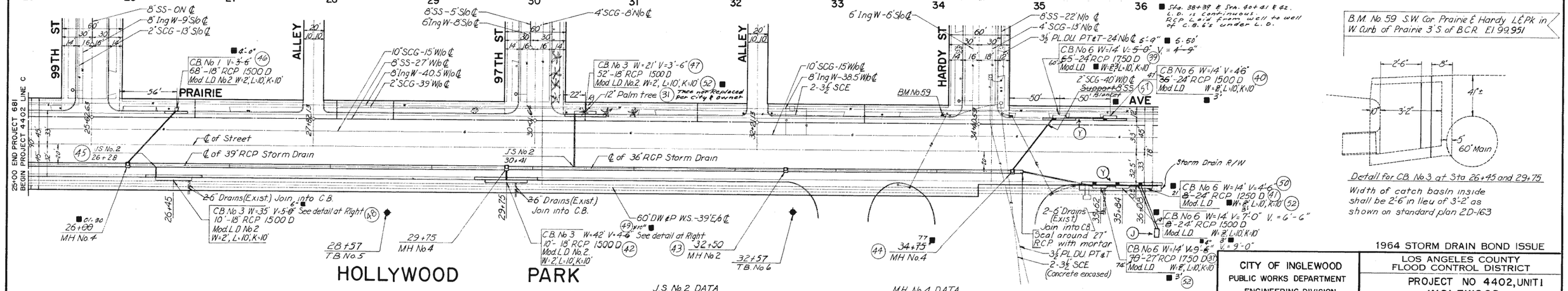
RECOMMENDED BY: R. R. Rudolph 4/6/66 DIVISION ENGINEER (DESIGN)
APPROVAL RECOMMENDED BY: A. M. Rutland ASST. CHIEF DEPUTY ENGINEER
APPROVED BY: Walter J. Wood 4/7/66 CHIEF ENGINEER

SCALE	DATE	DWG. NO. 364-4402-D2.1
AS SHOWN	JAN. '66	SHEET 1 OF 4

"AS BUILT" DRAWING







Sta. 38+39 & Sta. 40+41 & 42. L.D. is continuous. R.C.P. Laid from well to well of C.B.'s under L.D.

J.S No 2 DATA

STA.	A	B	C	D	E	L	F	G	EL. "R"	EL. "S"
26+28	30°	18"	40'	39"	1.3'	2.7'	1.0'	1.9'	81.80	80.00
30+41	90°	18"	4.0'	36"	1.5'	2.7	1.2'	1.5	84.01	83.42

M.H. No 4 DATA

STA.	A	B	C	D_1	D_2	F	T	EL "R"	EL "S"
26+00	50°	18"	5'	39"	39"	7"	4½"	80.37	79.86
29+75	90°	18"	4'	36"	39"	7"	4½"	84.92	82.68
34+75	54°	24"	7'	36"	36"	6½"	5¼"	88.37	87.49

PLAN
SCALE: 1" = 40'
25 0 25 50

DRAWN BY	REVISIONS		
INGLEWOOD	MARK	DATE	DESCRIPTION
CHECKED BY	△	5-4-67	Note Change Of Project Limits
INGLEWOOD	■	7-26-68	"As Built"
DESIGNED BY	Ⓙ	11-22-72	PERMIT Nº 69184. DWG. Nº 364-4402-F5
INGLEWOOD	Ⓨ	11-22-72	PERMIT Nº 69322 DWG. Nº 364-4402-F6 Item 9
SUBMITTED BY			
C. W. H.			

⚠ NOTE CHANGE OF PROJECT LIMITS
Due to bond issue financing requirements, the upstream limit of Project 681, has been changed to Station 14+98. See DWG. NO. 364-681-D2.3. The downstream limit of Project 4402 Unit 1, Line C, has been extended to meet the new upstream limit of Project 681, see DWG. NO. 364-4402-D2.

PJD036490

1964 STORM DRAIN BOND ISSUE

CITY OF INGLEWOOD
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION

SUBMITTED BY:
R. K. Lee
ASSISTANT CITY ENGINEER R.C.E. 13078

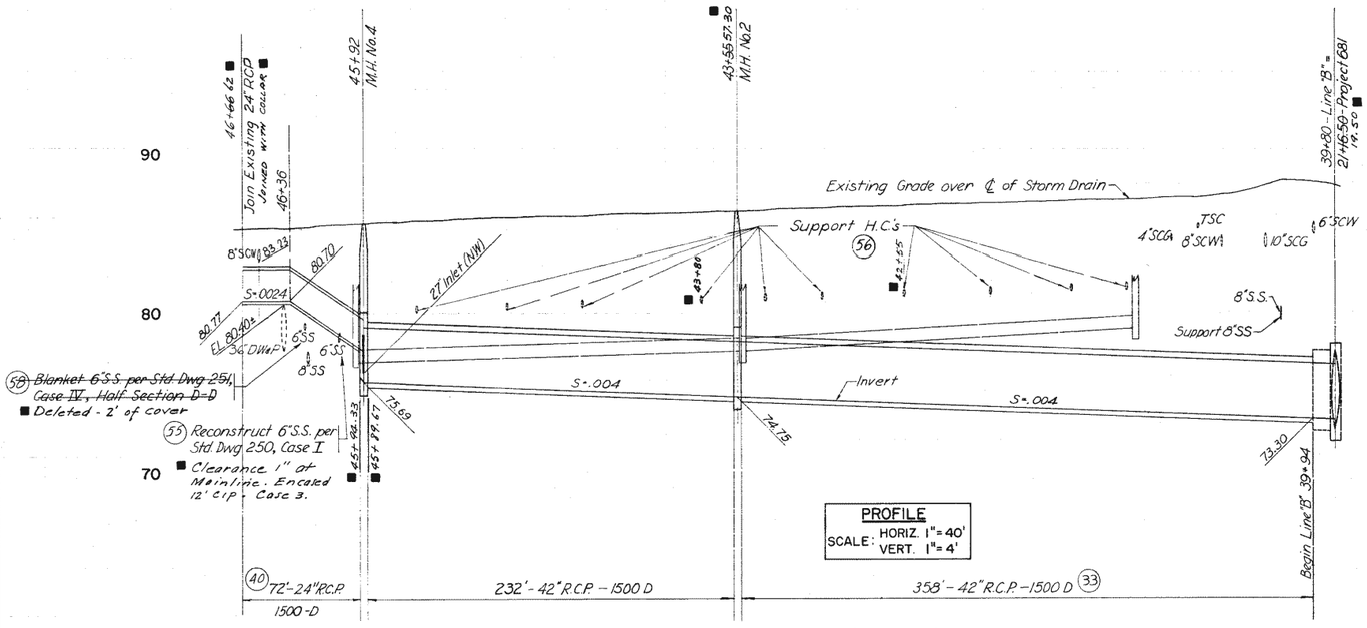
APPROVED BY:
Will Harman
CITY ENGINEER R.C.E. 11237
11-15-65 DATE

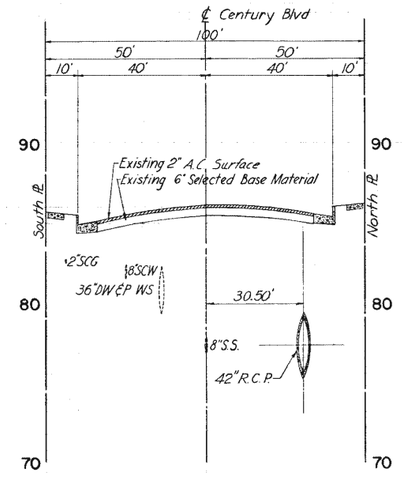
LOS ANGELES COUNTY FLOOD CONTROL DISTRICT
PROJECT NO 4402, UNIT I
INGLEWOOD
LINE C
CONCRETE CONDUIT
STA. 25+00 TO STA. 34+85
PLAN AND PROFILE

RECOMMENDED BY: R. R. Rich, DIVISION ENGINEER (DESIGN)
APPROVAL RECOMMENDED BY: Gurnland, ASS'T CHIEF DEPUTY ENGINEER
APPROVED BY: Walter J. Wood, CHIEF ENGINEER

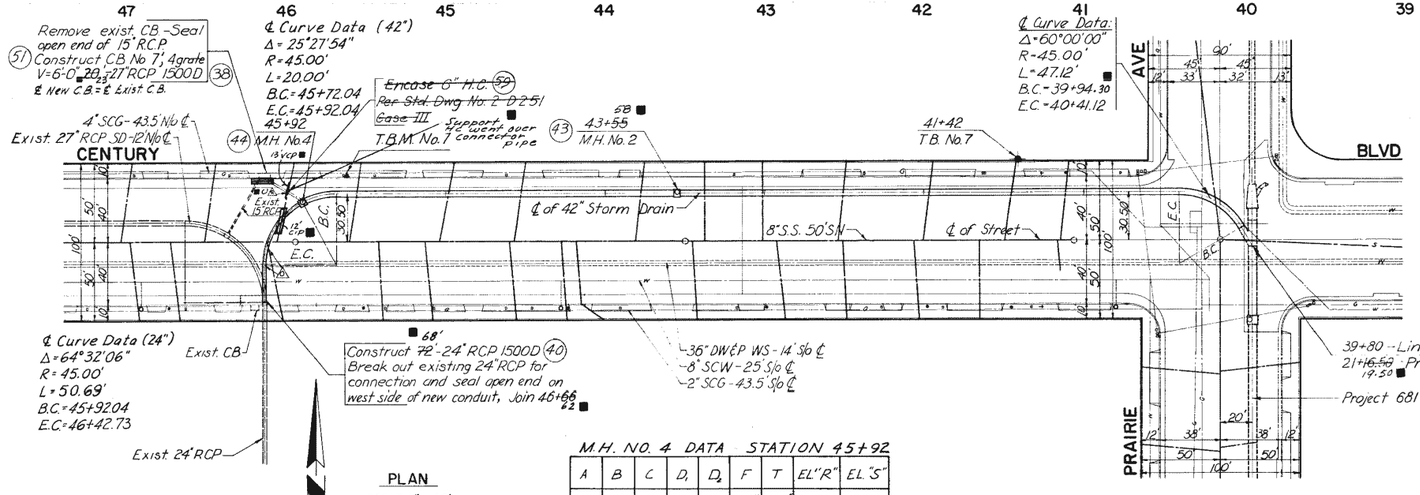
SCALE	DATE	DWG. NO. 364-4402-D2.2
AS SHOWN	JAN. 12 '66	SHEET 2 OF 4

"AS BUILT" DRAWING





CROSS SECTION
STA. 45+65
SCALE: HORIZ. 1"=20'
VERT. 1"=4'



PLAN
SCALE: 1" = 40'
25 0 25 50

T.B.M. No. 7 L℄Pk in N Curb of Century 550' W. of ℄ of Prairie El. 86.046

M.H. NO. 4 DATA STATION 45+92

A	B	C	D_1	D_2	F	T	EL "R"	EL "S"
36"	27"	8'	24"	42"	7½"	5½"	76.27	75.68

DRAWN BY	REVISIONS		
INGLEWOOD	MARK	DATE	DESCRIPTION
CHECKED BY	■	7-26-68	"As Built"
INGLEWOOD			
DESIGNED BY			
INGLEWOOD			
SUBMITTED BY			
C. W. H.			

1964 STORM DRAIN BOND ISSUE

CITY OF INGLEWOOD
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION

SUBMITTED BY:
R. K. Jue
ASSISTANT CITY ENGINEER R.C.E. 13078

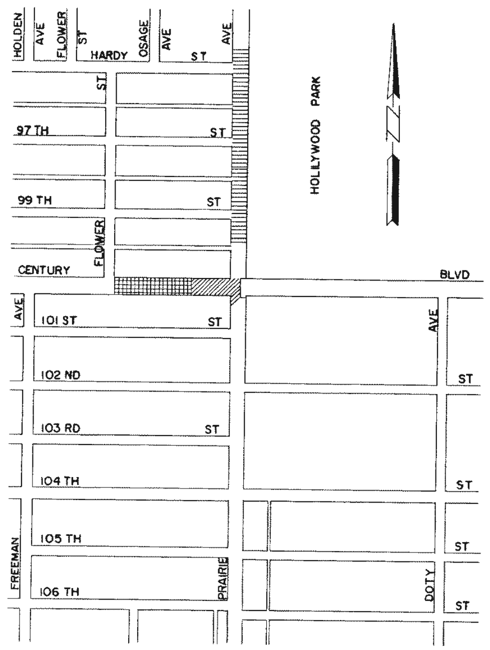
APPROVED BY:
Wm. Hannam 11-15-65
CITY ENGINEER R.C.E. 11237 DATE

LOS ANGELES COUNTY
FLOOD CONTROL DISTRICT
PROJECT NO. 4402, UNIT I
INGLEWOOD
LINE B
CONCRETE CONDUIT
STA. 39+80 TO STA. 46+66
PLAN AND PROFILE

RECOMMENDED BY: DIVISION ENGINEER - DESIGN
APPROVAL RECOMMENDED BY: ASS'T CHIEF DEPUTY ENGINEER
APPROVED BY: CHIEF ENGINEER

SCALE	DATE	DWG. NO. 364-4402-D2.3
AS SHOWN	JAN. 1966	SHEET 3 OF 4

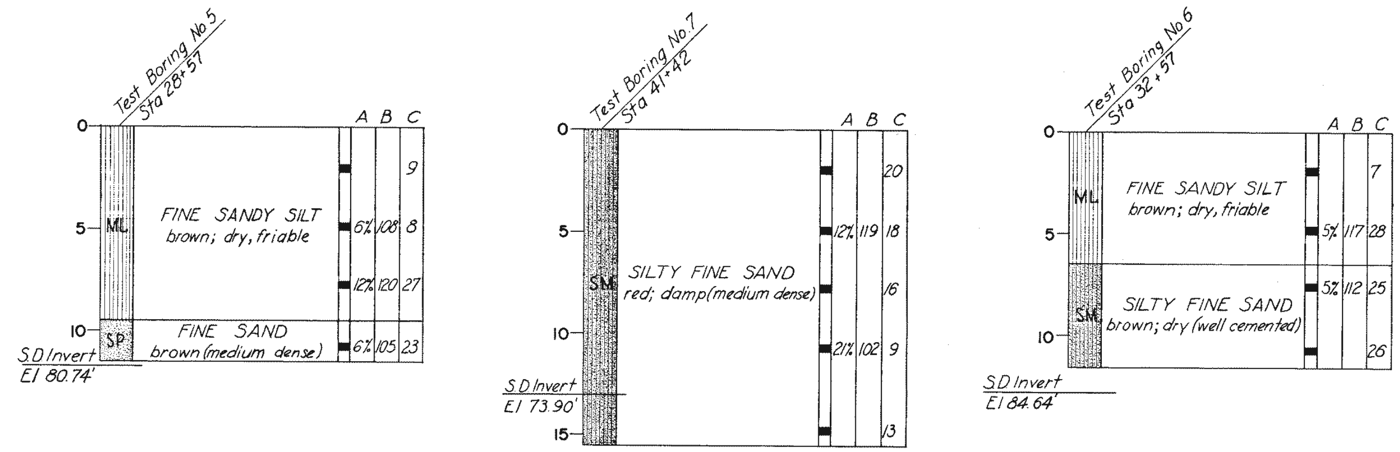
"AS BUILT" DRAWING

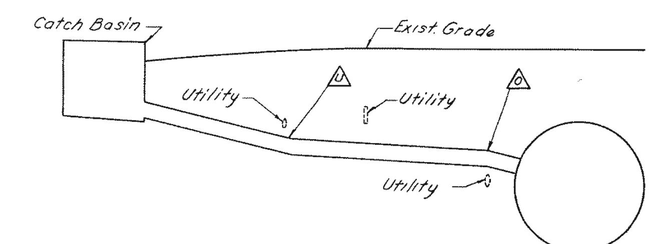


RESURFACING MAP

500 0 500 1000 1500
GRAPHIC SCALE

EXISTING SURFACE	PROPOSED RESURFACING (30)
8" P.C.C. PAVEMENT ON 6" SELECTED BASE MATERIAL	8" P.C.C. PAVEMENT ON 6" SELECTED BASE MATERIAL
2" A. C. SURFACE ON 6" SELECTED BASE MATERIAL	3" A. C. SURFACE ON 6" SELECTED BASE MATERIAL
2½" A. C. SURFACE ON 6" PORTLAND CEMENT CONC.	2½" A. C. SURFACE ON 6" PORTLAND CEMENT CONC.





LEGEND AND NOTES:

SCALE: (VERTICAL) 1" = 4'

A MOISTURE CONTENT IN PERCENTAGE
B DRY DENSITY IN LBS PER CUBIC FOOT
C STANDARD PENETRATION; NO. OF BLOWS PER FOOT
■ DEPTH AT WHICH UNDISTURBED SAMPLE WAS TAKEN

ALL BORINGS WERE COMPLETED 8-26-65 AND 8-27-65.

NO GROUND WATER OR CAVING WAS ENCOUNTERED IN ANY BORING.

INVERT OF STORM DRAIN SHOWN ON THIS SHEET SUPERSEDES THAT SHOWN IN THE SOIL REPORT.

THE SOIL CLASSIFICATIONS SHOWN ARE IN ACCORDANCE WITH THE UNIFIED SOIL CLASSIFICATION SYSTEM.

NOTES:

1. The change in grade of the connector pipe may occur either over or under an existing utility. The particular utility at which the change occurs is noted on the project drawings. At locations where utility crossings are marked o the connector pipe grade will break over the utility. At locations where utility crossings are marked u the connector pipe grade will break under the utility.
2. On those connector pipes where change in grade is not indicated, it is assumed that the connector pipe can be laid on a straight grade from the catch basin to the storm drain without interference with utilities.
3. Where connector pipe has a change of grade exceeding .10'/ft. or differs in diameter from that of existing pipe, use concrete collar per std 2-D 393
4. The Contractor shall make exploratory excavation to determine the exact location and depth of utilities which are marked △ or △. After the exact location of a utility has been determined, the grade and alignment of the connector pipe will be staked so as to clear the utility.

TYPICAL CONNECTOR PIPE PROFILE
NO SCALE

1964 STORM DRAIN BOND ISSUE

CITY OF INGLEWOOD
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION

SUBMITTED BY:
R. K. Jue
ASSISTANT CITY ENGINEER R.C.E. 13078

APPROVED BY:
[signature] 12-2-65
CITY ENGINEER R.C.E. 11237 DATE

LOS ANGELES COUNTY FLOOD CONTROL DISTRICT
PROJECT NO. 4402, UNIT I
INGLEWOOD
LOG OF BORINGS, RESURFACING PLAN AND MISCELLANEOUS DETAILS

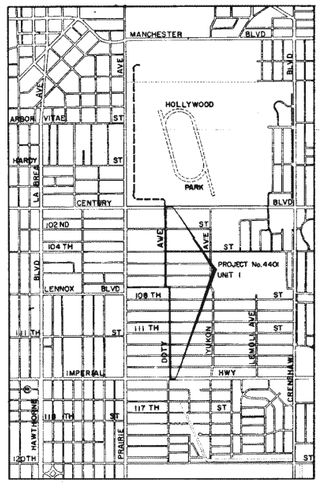
RECOMMENDED BY [signature] DIVISION ENGINEER (DESIGN)
APPROVAL RECOMMENDED BY [signature] ASST. CHIEF DEPUTY ENGINEER
APPROVED BY Walter J. Wood CHIEF ENGINEER

SCALE	DATE	DWG. NO. 364-4402-D2.4
AS SHOWN	JAN 12 '66	SHEET 4 OF 4

DRAWN BY	REVISIONS		
INGLEWOOD	MARK	DATE	DESCRIPTION
CHECKED BY INGLEWOOD			
DESIGNED BY INGLEWOOD			
SUBMITTED BY C. W. H.			

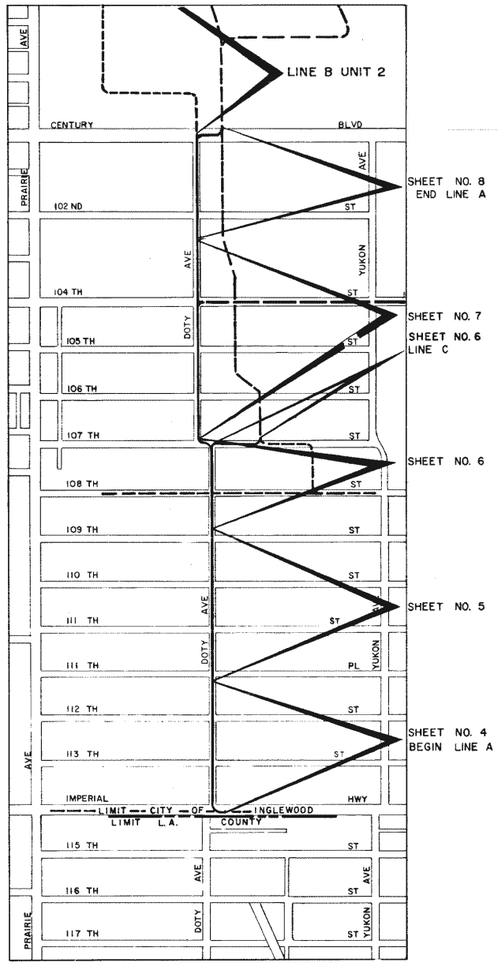
PD036492

"AS BUILT" DRAWING



VICINITY MAP

1000 0 1000 2000 3000 4000
GRAPHIC SCALE



LOCATION MAP

500 0 500 1000 1500
GRAPHIC SCALE

INDEX TO DRAWINGS

SHEET NO.	TITLE
1.	VICINITY MAP, LOCATION PLAN, INDEX TO DRAWINGS
2.	GENERAL NOTES, STRUCTURAL NOTES
3.	LEGEND & ABBREVIATIONS, STANDARD DRAWINGS, STRUCTURAL NOTES
4.	PLAN & PROFILE CONCRETE CONDUIT LINE A
5.	PLAN & PROFILE CONCRETE CONDUIT LINE A
6.	PLAN & PROFILE CONCRETE CONDUIT LINES A AND C
7.	PLAN & PROFILE CONCRETE CONDUIT LINE A
8.	PLAN & PROFILE CONCRETE CONDUIT LINE A
9.	PLAN & PROFILE COUNTY TRUNK LINE, SEWER LINE A & SEWER SIPHON
10.	PLAN & PROFILE SANITARY SEWER SIPHON
11.	SINGLE R.C. BOX SCHEDULE & DETAILS
12.	SINGLE R.C. BOX SCHEDULE
13.	RESURFACING PLAN
14.	LOG OF BORINGS

LEGEND

Proposed Storm Drain (UNIT I)
Proposed Storm Drain
Existing Storm Drain

■ "AS BUILT" DWGS.

1964 STORM DRAIN BOND ISSUE

DRAWN BY	REVISIONS		
	MARK	DATE	DESCRIPTION
CHECKED BY			
DESIGNED BY			
SUBMITTED BY			

CITY OF INGLEWOOD
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION

SUBMITTED BY: William J Maher
ASSISTANT CITY ENGINEER R.C.E. 17167

APPROVED BY: Wes Lane 1-31-74
CITY ENGINEER R.C.E. 11237 DATE

LOS ANGELES COUNTY
FLOOD CONTROL DISTRICT

PROJECT NO. 4401
INGLEWOOD
LINES A AND C UNIT I
VICINITY MAP, LOCATION MAP
AND INDEX TO DRAWINGS

RECOMMENDED BY: D Milne 1-31-74
DIVISION ENGINEER (DESIGN)

APPROVED BY: A E Bumpton
CHIEF ENGINEER - CIVIL ENGINEER NO. 8726

SCALE AS SHOWN | DATE Sept 74 | DWG. NO. 364-4401-D.6.1 | SHEET 1 OF 14

"AS BUILT" DRAWING

GENERAL NOTES

1. NUMBERS IN CIRCLES INDICATE ITEM UNDER WHICH PAYMENT WILL BE MADE.
2. ELEVATIONS SHOWN ARE IN FEET ABOVE THE U.S.G.S. MEAN SEA LEVEL DATUM.
3. STATIONS SHOWN ON DRAWINGS ARE ALONG CENTERLINE OF CONDUIT OR ON A LINE NORMAL TO CENTERLINE OF CONDUIT.
4. STATIONS AND INVERT ELEVATIONS OF PIPE INLETS SHOWN ON THE PROFILES ARE AT THE INSIDE FACE OF THE CONDUIT, UNLESS OTHERWISE SHOWN.
5. ALL FIELD BOOK REFERENCES ARE TO CITY OF INGLEWOOD FIELD BOOKS, UNLESS OTHERWISE NOTED.
6. LOCATIONS SHOWN ON THE PLANS FOR EXISTING SANITARY SEWER HOUSE CONNECTIONS ARE APPROXIMATE ONLY.
7. PIPE CONNECTIONS TO STORM DRAIN SHALL CONFORM TO STANDARD DRAWING 2-D191 & 2-D193 UNLESS OTHERWISE SHOWN.
8. TIES FOR CATCH BASINS AS SHOWN ON THE DRAWINGS ARE FROM CURB RETURN TO CENTER LINE OF CATCH BASINS, UNLESS OTHERWISE SHOWN.
9. LOCATIONS OF CATCH BASIN CONNECTOR PIPE JUNCTIONS WITH CATCH BASINS AS SHOWN ON THE DRAWINGS ARE SCHEMATIC. IT IS INTENDED THAT SUCH JUNCTIONS BE LOCATED AT THE DOWNSTREAM ENDS OF THE CATCH BASINS, UNLESS A DETAIL OF THE CONNECTION IS SHOWN OR A NOTE SPECIFICALLY INDICATES OTHERWISE. IN ALL CASES THE EXACT LOCATIONS WILL BE DETERMINED IN THE FIELD BY THE ENGINEER TO MEET FIELD CONDITIONS.
10. MONOLITHIC CATCH BASIN CONNECTIONS SHALL BE CONSTRUCTED, WHERE APPLICABLE, PER STANDARD DRAWING 2-D224.
11. "V_1" IS THE DEPTH OF INLET OF CATCH BASINS IN SERIES MEASURED FROM TOP OF CURB TO INVERT OF CONNECTOR PIPE. "V_2" IS THE SAME AS "V" ON THE VARIOUS CATCH BASIN STANDARD DRAWINGS.
12. ALL EXISTING SANITARY SEWERS SHOWN ON THE DRAWINGS ARE CITY OF INGLEWOOD SEWERS, UNLESS OTHERWISE NOTED.
13. EXISTING UTILITIES SHALL BE MAINTAINED IN PLACE BY THE CONTRACTOR, UNLESS OTHERWISE NOTED.
14. DELETED.
15. UTILITIES DESIGNATED BY THE SYMBOL "*" WILL BE ABANDONED IN PLACE AND THE OWNER WILL INSTALL A NEW SECTION OF THE AFFECTED UTILITY AT A LOCATION IN CLOSE PROXIMITY TO, BUT WHICH DOES NOT PHYSICALLY INTERFERE WITH, THE PROPOSED STORM DRAIN CONDUIT AND APPURTENANT STRUCTURES.
16. WHERE UTILITIES ARE INDICATED ON THE DRAWINGS TO BE SUPPORTED, SAID SUPPORTS SHALL BE IN ACCORDANCE WITH STANDARD DRAWING 2-D173.1, .2 OR .3, UNLESS OTHERWISE INDICATED.

GENERAL NOTES

17. SANITARY SEWER HOUSE CONNECTION RECONSTRUCTION AND RECONNECTION SHALL BE IN ACCORDANCE WITH STANDARD DRAWING 2-D250, UNLESS OTHERWISE SHOWN.
18. SANITARY SEWERS AND HOUSE CONNECTIONS CROSSING OVER THE STORM DRAIN TRENCH SHALL BE SUPPORTED IN ACCORDANCE WITH STANDARD DRAWING 2-D173.1 TO .3 AND ENCASED PER GENERAL NOTE 1 ON STANDARD DRAWING 2-D173.1.
19. WHEN INDICATED ON THE DRAWINGS, SANITARY SEWERS AND HOUSE CONNECTIONS SHALL BE ENCASED OR BLANKETED IN ACCORDANCE WITH STANDARD DRAWING 2-D251.
20. ALL OPENINGS RESULTING FROM THE CUTTING OR PARTIAL REMOVAL OF EXISTING CULVERTS, PIPES OR SIMILAR STRUCTURES SHALL BE SEALED WITH 8 INCHES OF BRICK AND MORTAR OR 6 INCHES OF CONCRETE, UNLESS OTHERWISE SHOWN.
21. ALL RESURFACING, CURBS, GUTTERS, SIDEWALKS, DRIVEWAYS AND OTHER EXISTING IMPROVEMENTS TO BE RECONSTRUCTED SHALL BE CONSTRUCTED AT THE SAME ELEVATION AND LOCATION AS THE EXISTING IMPROVEMENTS, UNLESS OTHERWISE NOTED.
22. REFER TO SHEET 13 FOR TYPICAL CATCH BASIN CONNECTOR PIPE PROFILE.
23. STREET RESURFACING PLANS ARE SHOWN ON SHEET 13.
24. SOIL TEST BORINGS FOR THIS PROJECT WERE MADE IN AUGUST AND SEPTEMBER, 1972
25. PAY LINES FOR EXCAVATION FOR REINFORCED CONCRETE BOX CONDUIT ARE SHOWN ON SHEET 11 OF THE DRAWINGS.
26. DESIGN OF THE PIPE SHOWN HEREON IS BASED ON THE ASSUMPTION THE PIPE WILL BE INSTALLED IN ACCORDANCE WITH CASE III BEDDING AS SHOWN ON STANDARD DRAWING 2-D177 UNLESS OTHERWISE SHOWN. "W" VALUES SHALL BE AS SPECIFIED ON STANDARD DWG. 2-D177 FOR CASE III BEDDING, NOTES 3(a), 3(b) AND 3(c). IF THE "W" VALUE AT THE TOP OF THE PIPE IS EXCEEDED, THE BEDDING SHALL BE MODIFIED, AND/OR PIPE OF ADDITIONAL STRENGTH SHALL BE PROVIDED. THE PROPOSED MODIFICATION SHALL BE APPROVED BY THE DISTRICT.
27. CONCRETE BACKFILL SHALL BE PROVIDED AROUND PIPE 21" IN DIAMETER OR LESS WHERE THE COVER IS EQUAL TO OR LESS THAN 2'-0", AROUND PIPE GREATER THAN 21 INCHES IN DIAMETER BUT LESS THAN 39 INCHES WHERE THE COVER IS LESS THAN 1'-3", AND FOR PIPE 39" OR GREATER WHERE THE COVER IS LESS THAN 1'-0". THE CONCRETE BACKFILL SHALL BE AS SPECIFIED ON STANDARD DRAWING 2-D177, NOTE 3.
28. CURB FACE (C.F) SHOWN ON THE GENERAL PLAN PERTAINS TO THE CURB FACE AT THE CATCH BASIN OPENING UNLESS OTHERWISE NOTED. FOR LOCAL DEPRESSION NO. 2, THE CURB FACE SHALL BE THE EXISTING PLUS 4", UNLESS OTHERWISE SPECIFIED.
29. ASBESTOS CEMENT PIPE MAY BE USED IN LIEU OF REINFORCED CONCRETE PIPE 42 INCHES OR LESS IN DIAMETER.
30. THE REQUIRED D-LOAD FOR THE ASBESTOS CEMENT PIPE SHALL BE 1.5 TIMES THAT SPECIFIED ON THE PLANS FOR REINFORCED CONCRETE PIPE.
31. UTILITIES DESIGNATED BY THE SYMBOL ≠ WILL BE REMOVED BY THE OWNER AND THE OWNER WILL REINSTALL A NEW SECTION OF THE AFFECTED UTILITY AT A LOCATION IN CLOSE PROXIMITY TO, BUT WHICH DOES NOT PHYSICALLY INTERFERE WITH, THE PROPOSED STORM DRAIN CONDUIT AND APPURTENANT STRUCTURES.

STRUCTURAL NOTES

1. DIMENSIONS FROM FACE OF CONCRETE TO STEEL ARE TO CENTER OF BAR AND SHALL BE 2" UNLESS OTHERWISE SHOWN.
2. CONCRETE DIMENSIONS SHALL BE MEASURED HORIZONTALLY OR VERTICALLY ON THE PROFILE, AND PARALLEL TO OR AT RIGHT ANGLES (OR RADIALLY) TO CENTERLINE OF CONDUIT ON THE PLAN EXEPT AS OTHERWISE SHOWN.
3. ALL BAR BENDS AND HOOKS SHALL CONFORM TO THE 1963 AMERICAN CONCRETE INSTITUTE'S "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE" SECTION 801.
4. PLACING OF REINFORCEMENT SHALL CONFORM TO THE 1963 AMERICAN CONCRETE INSTITUTE'S "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE" SECTION 803.
5. TRANSVERSE CONSTRUCTION JOINTS SHALL NOT BE PLACED WITHIN 30 INCHES OF MANHOLE OR JUNCTION STRUCTURE OPENINGS.
6. TRANSVERSE CONSTRUCTION JOINTS IN WALLS AND SLABS SHALL BE IN THE SAME PLANE. NO STAGGERING OF JOINTS WILL BE PERMITTED. TRANSVERSE CONSTRUCTION JOINTS SHALL BE NORMAL OR RADIAL TO THE CENTER LINE OF CONSTRUCTION.
7. THE TRANSVERSE REINFORCING STEEL SHALL TERMINATE 1-1/2 INCHES FROM THE CONCRETE SURFACE UNLESS OTHERWISE SHOWN ON THE STRUCTUAL DETAILS.
8. EXPOSED EDGES OF CONCRETE MEMBERS SHALL BE ROUNDED OR BEVELED.
9. NO SPLICES IN TRANSVERSE STEEL REINFORCEMENT WILL BE PERMITTED OTHER THAN SHOWN ON THE DRAWING WITHOUT APPROVAL OF THE ENGINEER. NO MORE THAN 2 SPLICES WILL BE PERMITTED IN ANY LONGITUDINAL BAR BETWEEN TRANSVERSE JOINTS. SPLICES SHALL BE STAGGERED.
10. LONGITUDINAL STEEL SHALL BE LAPPED 20 BAR DIAMETERS AT SPLICES. TRANSVERSE STEEL SHALL BE LAPPED 30 BAR DIAMETERS AT SPLICES.
11. LONGITUDINAL STEEL SHALL BE CONTINUOUS AND EXTEND THROUGH ALL CONSTRUCTION JOINTS.
12. UNLESS OTHERWISE SHOWN ON THE DRAWINGS, TRANSVERSE JOINT KEYWAYS (IN BOTH SLABS AND WALLS), AS DETAILED FOR LONGITUDINAL KEYWAYS AT THE BASE OF THE WALLS, SHALL BE PLACED AT THE END OF EACH POUR, BUT THE SPACING THEREOF SHALL NOT EXCEED 50 FEET OR BE LESS THAN 10 FEET. SPACING MAY BE DECREASED TO AVOID PROXIMITY TO INLETS. ALL CONSTRUCTION JOINTS IN BOTTOM SLAB, TOP SLAB, AND SIDE WALLS SHALL BE IN THE SAME PLANE. NO STAGGERING OF JOINTS WILL BE PERMITTED.
13. THE VERTICAL STEEL IN THE INTERIOR FACE OF EXTERIOR WALLS MAY BE SPLICED AT THE CONSTRUCTION JOINT AT THE BASE OF THE WALL. THE SPLICE SHALL BE 20 BAR DIAMETERS IN LENGTH.

PD036451

1964 STORM DRAIN BOND ISSUE

DRAWN BY	REVISIONS		
R.W.S.	MARK	DATE	DESCRIPTION
CHECKED BY			
DESIGNED BY			
SUBMITTED BY			

CITY OF INGLEWOOD
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION

SUBMITTED BY:
William J. Mahar
ASSISTANT CITY ENGINEER R.C.E. 17167

APPROVED BY:
1-3-74
CITY ENGINEER R.C.E. 11237 DATE

LOS ANGELES COUNTY
FLOOD CONTROL DISTRICT

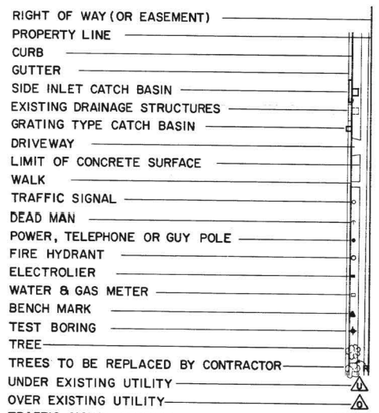
PROJECT NO. 4401
INGLEWOOD
LINES A AND C UNIT 1
GENERAL NOTES & STRUCTURAL NOTES

RECOMMENDED BY
DIVISION ENGINEER (DESIGN)

SCALE: AS SHOWN | DATE: Sept, 74 | DWG. NO. 364-4401-D6.2 | SHEET 2 OF 14

"AS BUILT" DRAWING

LEGEND AND ABBREVIATIONS



RIGHT OF WAY (OR EASEMENT)	
PROPERTY LINE	
CURB	
GUTTER	
SIDE INLET CATCH BASIN	
EXISTING DRAINAGE STRUCTURES	
GRATING TYPE CATCH BASIN	
DRIVEWAY	
LIMIT OF CONCRETE SURFACE	
WALK	
TRAFFIC SIGNAL	
DEAD MAN	
POWER, TELEPHONE OR GUY POLE	
FIRE HYDRANT	
ELECTROLIER	
WATER & GAS METER	
BENCH MARK	
TEST BORING	
TREE	
TREES TO BE REPLACED BY CONTRACTOR	
UNDER EXISTING UTILITY	
OVER EXISTING UTILITY	
TRAFFIC SIGNAL CONDUIT	T.S.C.
TRANSITION STRUCTURE	T.S.
MANHOLE	M.H.
LOCAL DEPRESSION	L.D.
REINFORCED CONCRETE PIPE	R.C.P.
TEST BORING	T.B.
JUNCTION STRUCTURE	J.S.
CATCH BASIN	C.B.
SANITARY SEWER	S.S.
TEMPORARY BENCH MARKS	T.B.M.
SOUTHERN CALIFORNIA GAS CO.	S.C.G.
L.A. DEPT. OF WATER & POWER WATER SYST.	D.W.&P.W.S.
SOUTHERN CALIFORNIA WATER CO.	S.C.W.
INGLEWOOD CITY WATER DEPT.	I.W.D.
SOUTHERN CALIFORNIA EDISON CO.	S.C.E.
PACIFIC TELEPHONE & TELEGRAPH CO.	P.T.&T.
RICHFIELD OIL CO. GAS LINE	R.G.L.
HOLLYWOOD TURF CLUB WATER	H.T.C.W.
UNIFIED SCHOOL DISTRICT WATER	U.S.D.W.
BURRIED CABLE	BUR. CA.
CRUSHED AGGREGATE BASE	C.A.B.
LIGHT STANDARD	L.S.

LOS ANGELES COUNTY FLOOD CONTROL DISTRICT
STANDARD DRAWINGS

DRAWING NO.	TITLE
2-D 88	LOCAL DEPRESSION NO. 2
2-D 96	STANDARD DROP STEP
2-D104	MANHOLE NO. 3
2-D107	CONCRETE RINGS, REDUCER AND PIPE FOR MANHOLE SHAFT
2-D156	MANHOLE FRAME AND COVER FOR CATCH BASINS
2-D157	CATCH BASIN REINFORCEMENT FOR ROUND MANHOLES
2-D160	CATCH BASIN NO. 1
2-D162	CATCH BASIN NO. 2
2-D171	STANDARD A-615 REINFORCING BARS
2-D172	CATCH BASIN REINFORCEMENT
2-D173.1 TO .3	PIPE SUPPORTS ACROSS TRENCHES
2-D175	REMOVABLE PROTECTION BAR FOR CATCH BASINS
2-D177	PIPE BEDDING IN TRENCHES
2-D184	MANHOLE NO. 2
2-D189	JUNCTION STRUCTURE NO.1
2-D191	JUNCTION STRUCTURE NO.3
2-D193	JUNCTION STRUCTURE NO.4
2-D224	CONNECTION TO CATCH BASIN FOR PIPES 12" THROUGH 72"
2-D232	DETAIL OF CATCH BASIN OPENING
2-D235	TRANSITION STRUCTURE NO. 1
2-D239	TRANSITION STRUCTURE NO. 2
2-D250	REMODELING OF SANITARY SEWER HOUSE CONNECTIONS
2-D251	PROTECTION FOR MAIN LINE AND HOUSE CONNECTION SEWERS
2-D264	ADJUSTABLE PROTECTION BAR STIRRUP
2-D393	CONCRETE COLLAR FOR PIPES 12" THROUGH 66"
2-D466	CRITERIA FOR THE DESIGN OF SHORING FOR EXCAVATIONS
2-D400	SAMPLE SHEET FOR USE AS A GUIDE IN PREPARING CALCULATIONS FOR SHORING OF EXCAVATIONS
2-D413	UNIFIED SOIL CLASSIFICATION SYSTEM
2-D465	ADDITIONAL REINFORCEMENT FOR JACKED R.C. BOX
2-D431	"D" LOAD TABLE FOR DESIGN OF ASBESTOS CEMENT PIPE
2-D461	MODIFICATIONS FOR SIDE OPENING CATCH BASINS
2-D472	STANDARD 24 INCH MANHOLE FRAME AND COVER
2-D476	PORTABLE SECURITY FENCE FOR OPEN TRENCHES

LOS ANGELES COUNTY ENGINEER
STANDARD DRAWINGS

DRAWING NO.	TITLE
S-3	BRICK MANHOLE
S-17	STANDARD MANHOLE STEP
S-21	BEDDING FOR SEWER PIPE
S-23	CRADLING AND ENCASEMENT
S-27	CHIMNEY PIPE AND BASE
S-33	ALLOWABLE TRENCH WIDTH
S-35	LOCKING MANHOLE FRAME AND COVER
S-36	NON-REINFORCED PRECAST CONCRETE MANHOLE

LOS ANGELES COUNTY ROAD DEPARTMENT
STANDARD DRAWINGS

M57-39R	PARTIAL CONCRETE REPLACMENT FOR CROSS GUTTER AND SPANDRELS
32-01	TYPICAL SIDEWALK DETAILS

LOS ANGELES COUNTY SANITATION DISTRICT
STANDARD DRAWINGS

DRAWING NO.	TITLE
S-a-201	STANDARD MANHOLE, TYPE "A"
S-a-204	STANDARD MANHOLE, TYPE "D"
S-a-207	STANDARD 24" MANHOLE FRAME & COVER
S-a-209	STANDARD MANHOLE STEP
S-a-217	CONCRETE PIPE SUPPORT
S-a-220	STANDARD PULL RING
S-a-222	TEMPORARY SEWER SUPPORT
S-a-227	STANDARD CONCRETE BEAM FOR HOUSE CONNECTIONS

CITY OF INGLEWOOD
STANDARD DRAWINGS

G-1	STANDARD CURB & GUTTER AND STANDARD CROSS GUTTER
G-2	STANDARD ALLEY INTERSECTION
G-4	STANDARD DRIVEWAY APPROACH

21. THE CONTRACTOR SHALL USE JACKING HEADS OR LOAD SPREADING BEAMS OF SUCH DESIGN AND SIZE AS TO SPREAD THE JACKING FORCE UNIFORMLY OVER THE ENTIRE INVERT SECTION.

22. IF THE LOAD SPREADING DEVICE OR JACKING HEAD SELECTED DOES NOT PERMIT THE REQUIRED 20 BAR DIAMETER EXTENSION OF THE NORMAL LONGITUDINAL STEEL, CONTINUITY MAY BE MAINTAINED BY DOWELING FROM THE ADJACENT SECTION.

23. THE LEADING EDGE OF CONDUIT SHALL BE EQUIPPED WITH A JACKING HEAD SECURELY ANCHORED THERE. THE LENGTH AND DETAILS OF THE JACKING HEAD SHALL BE SUBJECT TO THE APPROVAL OF THE ENGINEER.

24. THE USE OF GUIDE RAILS, SLABS, CRADLES, ETC. WILL BE SUBJECT TO WRITTEN APPROVAL BY THE ENGINEER.

STRUCTURAL NOTES CONT'D.

14. UNLESS OTHERWISE SHOWN ON THE DETAILS, IN CURVED SECTIONS TRANSVERSE BARS SHALL BE PLACED RADIALLY. STRAIGHT TRANSVERSE BARS IN TOP AND BOTTOM SLABS SHALL BE SPACED AS SHOWN ON THE TYPICAL SECTIONS; SPACING SHALL BE AT THE CENTERLINE OF CONSTRUCTION. STRAIGHT BARS AND L-BARS IN WALLS SHALL BE SPACED AS SHOWN ON THE TYPICAL SECTIONS, WITH THE SPACING MEASURED BETWEEN THE VERTICAL LEGS OF BARS.

15. AT THE BEGINNING AND ENDING OF ALL POURS, A CURTAIN OF REINFORCEMENT COMPOSED OF B, C, C_2, D, F, G, AND H BARS SHALL BE PLACED THREE INCHES FROM THE TRANSVERSE CONSTRUCTION JOINT.

16. IN ALL SECTIONS LAP C AND C_2 BARS, THE VERTICAL LENGTH OF C AND C_2 BARS HAS BEEN CALCULATED FOR A FOUR-INCH STARTER WALL. IF THE HEIGHT OF STARTER IS VARIED, THE VERTICAL LENGTH OF THE C AND C_2 BARS SHALL BE VARIED CORRESPONDINGLY SO AS TO MAINTAIN A 30 DIAMETER LAP BETWEEN THE TWO BARS. THE LAPS SHALL BE BASED ON THE SMALLER BAR.

17. IF WALL THICKNESS IS SIX INCHES, PLACE REINFORCEMENT AT THE CENTERLINE OF THE WALL.

18. CONCRETE QUANTITIES ARE BASED ON A SIX BY SIX INCH FILLET AND STEEL QUANTITIES DO NOT INCLUDE ANY OPTIONAL SPLICES.

19. ALL LONGITUDINAL BARS SHALL BE NO. 4 BARS. SPACING SHALL BE 18 INCHES UNLESS OTHERWISE SHOWN. BARS IN TOP OR BOTTOM SLAB SHALL BE SPACED SYMMETRICAL ABOUT THE CENTER LINE. BARS IN WALLS SHALL BE SPACED SYMMETRICALY ABOUT MID HEIGHT OF THE WALLS.

20. CONCRETE BREAKOUT NOTES:

    1. FOR CONCRETE REMOVAL, WHERE REINFORCEMENT IS TO BE RETAINED THROUGH THE JOINT, MAKE A SAWCUT ONE AND ONE-HALF INCHES DEEP ON THE EXPOSED FACES OF THE CONCRETE AT THE REMOVAL LIMITS. CUT A GROOVE IN THE CONCRETE ADJACENT TO THE SAWCUT, ON THE SIDE TO BE REMOVED TO THE DEPTH OF THE SAWCUT, WITH A CHIPPING HAMMER. EXISTING REINFORCEMENT SHALL BE RESTORED AND RETAINED OR CUT AND LAPPED 30 BAR DIAMETERS WITH NEW REINFORCEMENT.

    2. CARE SHALL BE EXERCISED IN SAWING AT THE REMOVAL LIMITS SO AS NOT TO CUT THE REINFORCEMENT IN THE STRUCTURE TO REMAIN. AFTER MAKING SAW CUTS THE CONCRETE SHALL BE REMOVED WITH HAND OPERATED EQUIPMENT. USE OF EXPLOSIVES, WRECKING BALLS, STOMPERS OR OTHER EQUIPMENT, WHICH WOULD CAUSE DAMAGE TO THE EXISTING FACILITY REMAINING IN PLACE, WILL NOT BE PERMITTED. THE ENGINEER SHALL BE THE SOLE JUDGE OF THE USAGE OF ANY EQUIPMENT FOR THE CONCRETE REMOVAL OPERATION.

1964 STORM DRAIN BOND ISSUE

DRAWN BY	REVISIONS		
CHECKED BY	MARK	DATE	DESCRIPTION
DESIGNED BY			
SUBMITTED BY			

CITY OF INGLEWOOD
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION

SUBMITTED BY:
William J. Maher
ASSISTANT CITY ENGINEER R.C.E. 17167

APPROVED BY:
Willis L. Lamm 1-31-74
CITY ENGINEER R.C.E. 11237 DATE

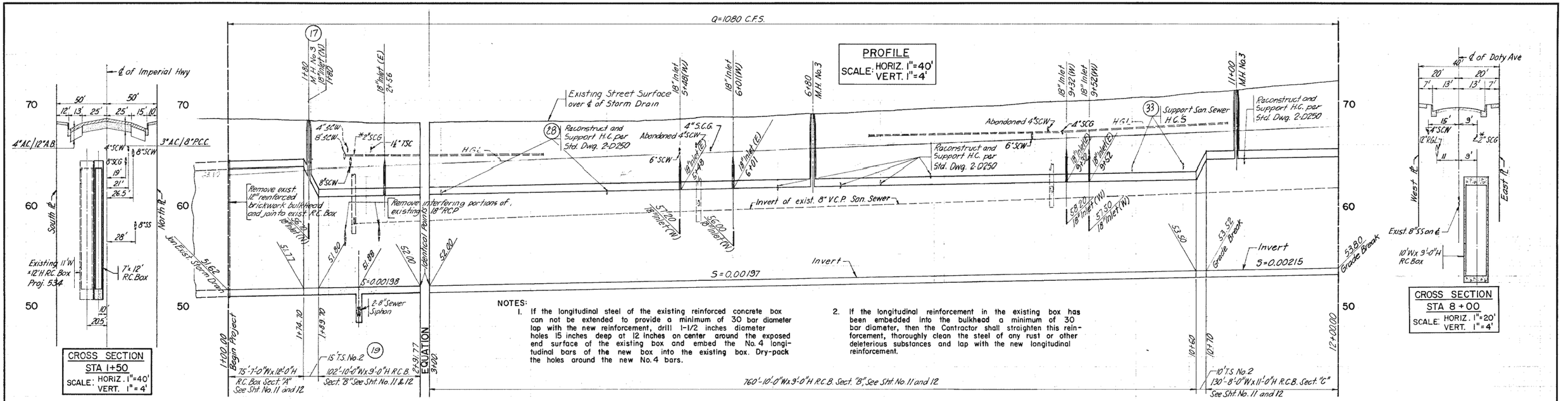
LOS ANGELES COUNTY
FLOOD CONTROL DISTRICT

PROJECT NO. 4401
INGLEWOOD
LINES A, AND C UNIT I
LEGEND AND ABBREVIATION,
STANDARD DRAWINGS, AND STRUCTURAL NOTES

RECOMMENDED BY
DIVISION ENGINEER (DESIGN)

SCALE	DATE	DWG. NO. 364-4401-D63
AS SHOWN	Sept 74	SHEET 3 OF 14

"AS BUILT" DRAWING



REVISIONS			
MARK	DATE	DESCRIPTION	
■	10-2-80	As Built	

DRAWN BY
CHECKED BY
DESIGNED BY
SUBMITTED BY

1964 STORM DRAIN BOND ISSUE

CITY OF INGLEWOOD
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION

SUBMITTED BY: William J. Mahar
ASSISTANT CITY ENGINEER R.C.E. 17167

APPROVED BY: [signature] 1-31-79
CITY ENGINEER R.C.E. 11237 DATE

LOS ANGELES COUNTY FLOOD CONTROL DISTRICT

PROJECT NO. 4401
INGLEWOOD
LINE A UNIT I
CONCRETE CONDUIT
STA. 1+00 TO STA. 12+00
PLAN AND PROFILE

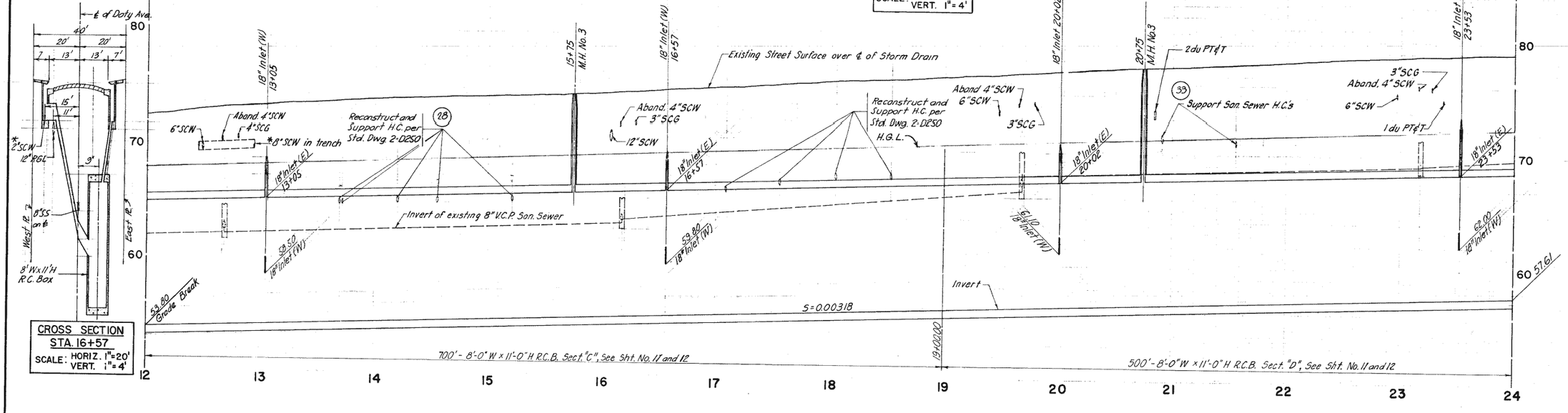
RECOMMENDED BY [signature]
DIVISION ENGINEER (DESIGN)

SCALE	DATE	DWG. NO. 364-4401-D6.4
AS SHOWN	Sept. 74	SHEET 4 OF 14

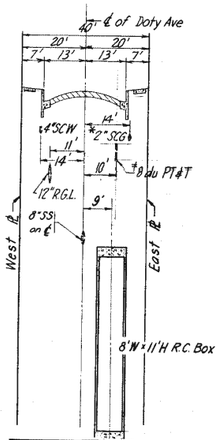
"AS BUILT" DRAWING

Q = 1061 C.F.S.

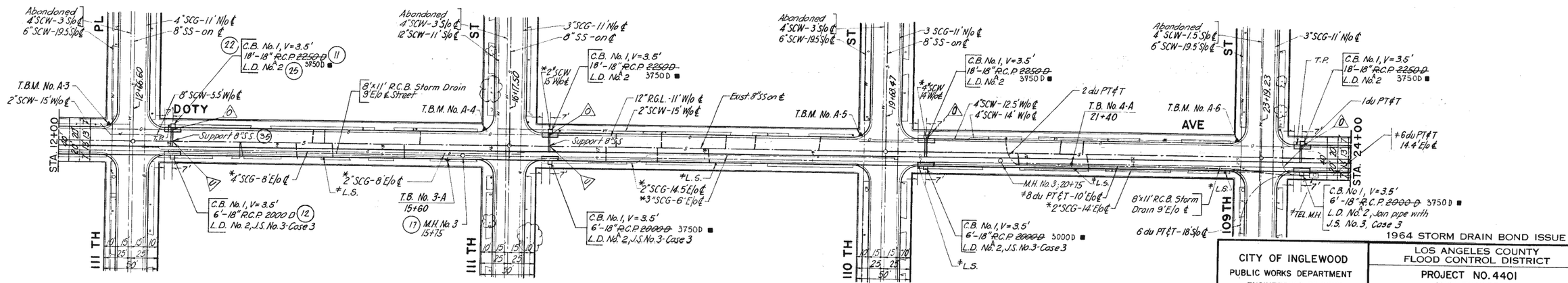
PROFILE
SCALE: HORIZ. 1"=40'
VERT. 1"=4'



CROSS SECTION STA. 16+57
SCALE: HORIZ. 1"=20'
VERT. 1"=4'



CROSS SECTION STA 22+00
SCALE: HORIZ. 1"=20'
VERT. 1"=4'



1964 STORM DRAIN BOND ISSUE

PLAN
SCALE: 1"=40'
25 0 25 50

LINE A

T.B.M. No. A-3 L℄ Pk. in curb return S/W cor. of Doty Ave. and 111 th Pl. 7' N/o B.C.R. El. 70.420

T.B.M. No. A-4 L℄ Pk. in curb return S/W cor. of Doty Ave. and 111 th St. 7' N/o B.C.R. El. 74.868

T.B.M. No. A-5 L℄ Pk. in curb return S/W cor. of Doty Ave. and 110 th St. 7' N/o B.C.R. El. 76.889

T.B.M. No. A-6 L℄ Pk. in curb return S/W cor. of Doty Ave. and 109 th St. 7' N/o B.C.R. El. 78.896

REVISIONS		
MARK	DATE	DESCRIPTION
■	10-2-80	As Built

DRAWN BY
CHECKED BY
DESIGNED BY
SUBMITTED BY

CITY OF INGLEWOOD
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION

SUBMITTED BY: William J. Maher
ASSISTANT CITY ENGINEER R.C.E. 17167

APPROVED BY: William D. Lama 1-31-74
CITY ENGINEER R.C.E. 11237 DATE

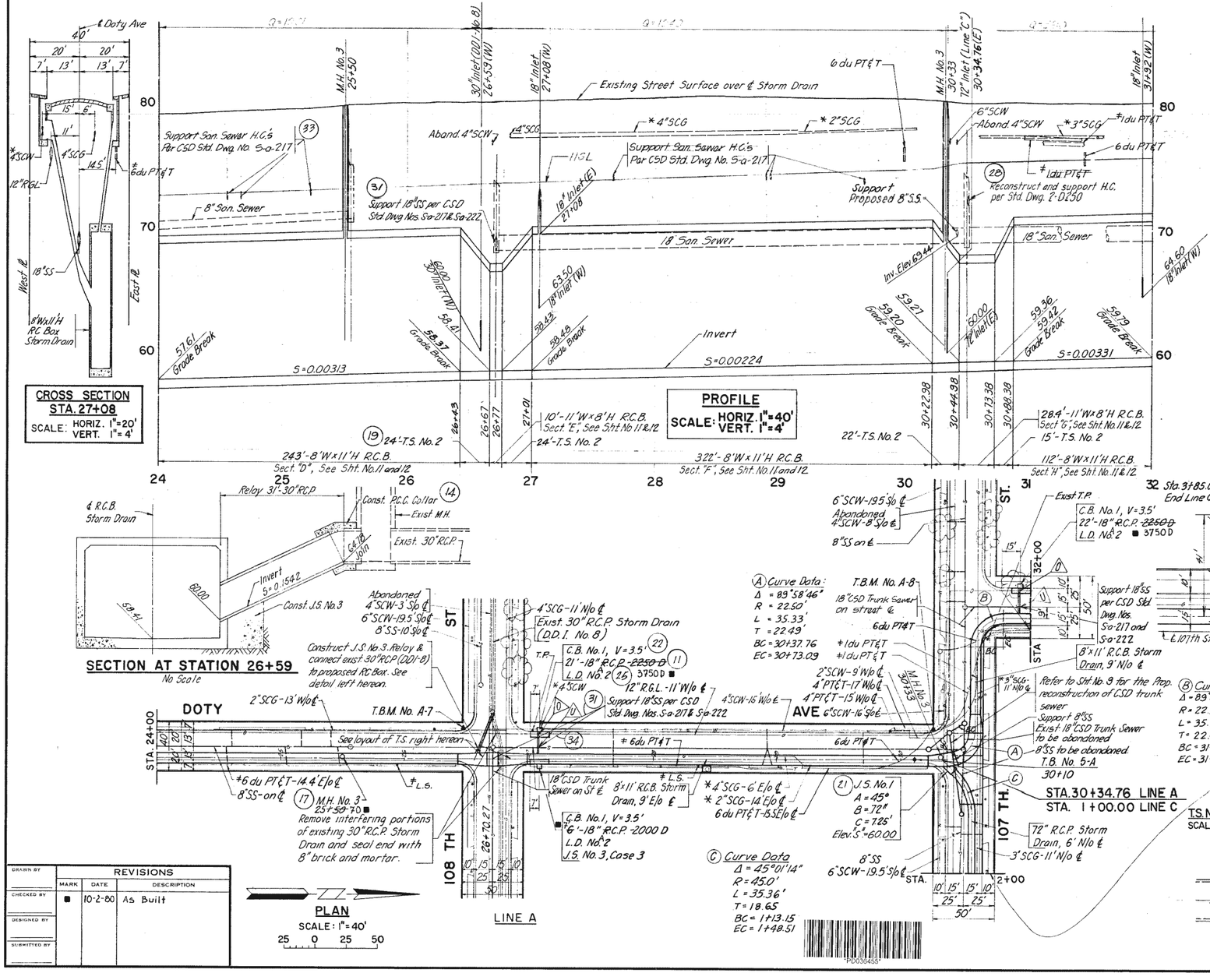
LOS ANGELES COUNTY
FLOOD CONTROL DISTRICT

PROJECT NO. 4401
INGLEWOOD
LINE A UNIT I
CONCRETE CONDUIT
STA. 12+00 TO STA. 24+00
PLAN AND PROFILE

RECOMMENDED BY Ayr Milne
DIVISION ENGINEER (DESIGN)

SCALE	DATE	DWG. NO. 364-4401-D6.5
AS SHOWN	Sept 74	SHEET 5 OF 14

"AS BUILT" DRAWING



REVISIONS			
MARK	DATE	DESCRIPTION
■	10-2-80	As Built

DRAWN BY
CHECKED BY
DESIGNED BY
SUBMITTED BY

CITY OF INGLEWOOD
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION

SUBMITTED BY:
William J. Maher
ASSISTANT CITY ENGINEER R.C.E. 17167

APPROVED BY
J-31-74
CITY ENGINEER R.C.E. 11237 DATE

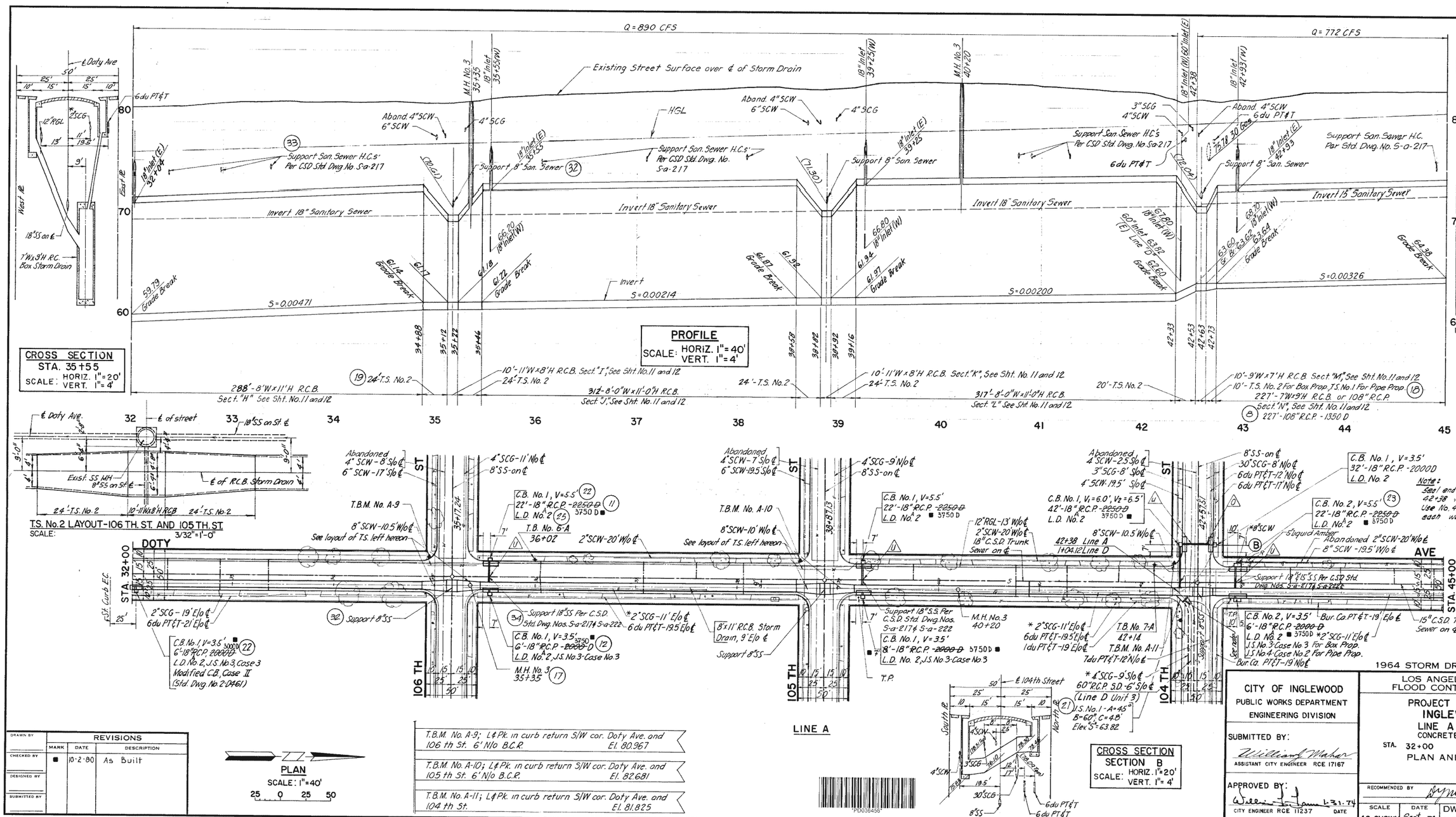
LOS ANGELES COUNTY
FLOOD CONTROL DISTRICT

PROJECT NO. 4401
INGLEWOOD
LINES A & C UNIT I
CONCRETE CONDUIT
STA. 24+00 TO STA. 32+00 LINE A
STA. 1+00 TO STA. 3+85.05 LINE C
PLAN AND PROFILE

RECOMMENDED BY
DIVISION ENGINEER (DESIGN)

SCALE AS SHOWN
DATE Sept, 74
DWG. NO. 364-4401-D6.6
SHEET 6 OF 14

"AS BUILT" DRAWING



REVISIONS			
MARK	DATE	DESCRIPTION
■	10-2-80	As Built

DRAWN BY
CHECKED BY
DESIGNED BY
SUBMITTED BY

1964 STORM DRAIN BOND ISSUE

CITY OF INGLEWOOD
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION

SUBMITTED BY:
William J. Maher
ASSISTANT CITY ENGINEER RCE 17167

APPROVED BY:
CITY ENGINEER RCE 11237 — DATE 3-31-74

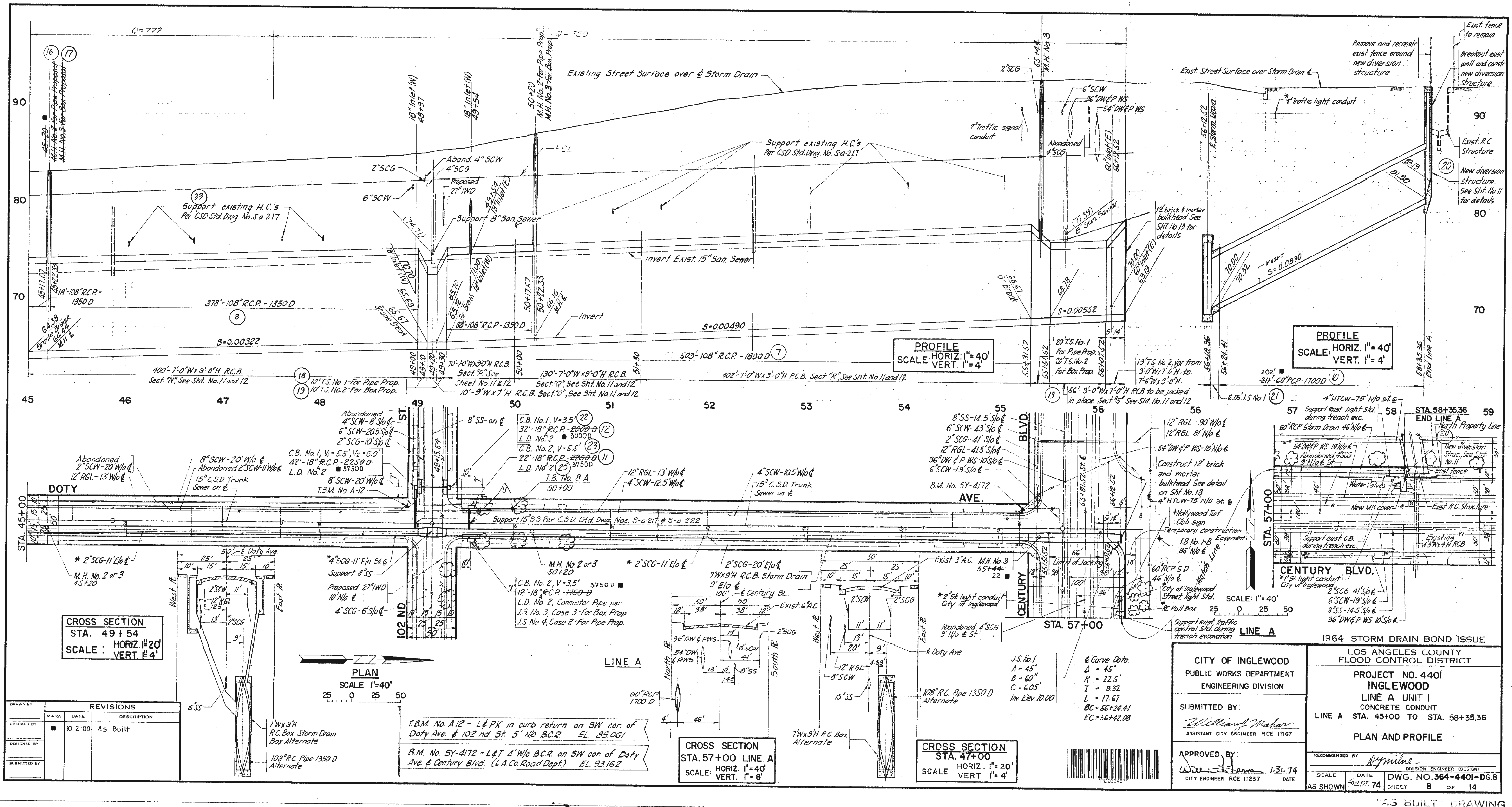
LOS ANGELES COUNTY FLOOD CONTROL DISTRICT

PROJECT NO. 4401
INGLEWOOD
LINE A UNIT I
CONCRETE CONDUIT
STA. 32+00 TO STA. 45+00
PLAN AND PROFILE

RECOMMENDED BY
DIVISION ENGINEER (DESIGN)

SCALE	DATE	DWG. NO. 364-4401-D6.7
AS SHOWN	Sept. 74	SHEET 7 OF 14

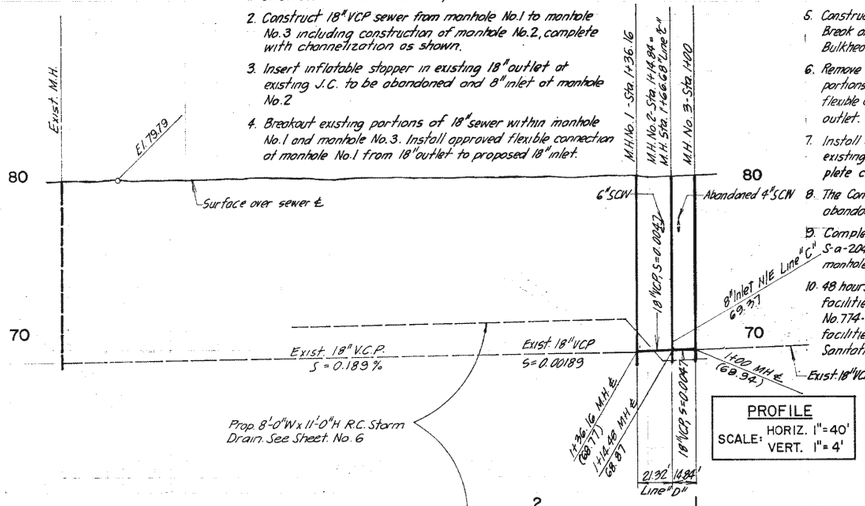
"AS BUILT" DRAWING


Existing Street Surface over ℄ Storm Drain
Support existing H.C.'s Per CSD Std. Dwg. No. S-a-217
Exist. Street Surface over Storm Drain ℄
PROFILE
SCALE: HORIZ. 1"=40' VERT. 1"=4'
S=0.00322
S=0.00490
S=0.00552
S=0.0530
400'-7'-0"W x 9'-0"H R.C.B. Sect. "N", See Sht. No. 11 and 12
378'-108" R.C.P. - 1350 D
509'-108" R.C.P. - 1600 D
402'-7'-0"W x 9'-0"H R.C.B. Sect. "R", See Sht. No. 11 and 12
130'-7'-0"W x 9'-0"H R.C.B. Sect. "Q", See Sht. No. 11 and 12
10'-9'W x 7'H R.C.B. Sect. "O", See Sht. No. 11 and 12
10' T.S. No. 1 - For Pipe Prop.
10' T.S. No. 2 - For Box Prop.
202' 211'-60" RCP-1700 D
Invert Exist. 15" San. Sewer
12" brick & mortar bulkhead. See Sht. No. 13 for details
New diversion structure See Sht. No. 11 for details
Remove and reconstr. exist fence around new diversion structure
Exist. fence to remain
Breakout exist. wall and const. new diversion structure
Exist. R.C. Structure
DOTY AVE.
102 ND ST.
CENTURY BLVD.
STA. 45+00
STA. 57+00
STA. 58+35.36 END LINE A
LINE A
PLAN
SCALE 1"=40'
CROSS SECTION STA. 49+54 SCALE: HORIZ. 1"=20' VERT. 1"=4'
CROSS SECTION STA. 57+00 LINE A SCALE: HORIZ. 1"=40' VERT. 1"=8'
CROSS SECTION STA. 47+00 SCALE HORIZ. 1"=20' VERT. 1"=4'
T.B.M. No. A12 - L℄ PK in curb return on SW cor. of Doty Ave. & 102 nd. St. 5' N/o B.C.R. EL. 85.061
B.M. No. SY-4172 - L℄T 4' W/o B.C.R. on SW cor. of Doty Ave. & Century Blvd. (L.A. Co. Road Dept) EL. 93.162
J.S. No. 1 A = 45° B = 60" C = 6.05' Inv. Elev. 70.00
℄ Curve Data. Δ = 45° R = 22.5' T = 9.32 L = 17.67 BC = 56+24.41 EC = 56+42.08
REVISIONS
MARK | DATE | DESCRIPTION
■ | 10-2-80 | As Built
1964 STORM DRAIN BOND ISSUE
CITY OF INGLEWOOD
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION
SUBMITTED BY: William J. Mahar ASSISTANT CITY ENGINEER RCE 17167
APPROVED BY: CITY ENGINEER RCE 11237 1.31.74 DATE
LOS ANGELES COUNTY FLOOD CONTROL DISTRICT
PROJECT NO. 4401
INGLEWOOD
LINE A UNIT 1
CONCRETE CONDUIT
LINE A STA. 45+00 TO STA. 58+35.36
PLAN AND PROFILE
RECOMMENDED BY DIVISION ENGINEER (DESIGN)
SCALE AS SHOWN
DATE Sept. 74
DWG. NO. 364-4401-D6.8
SHEET 8 OF 14
"AS BUILT" DRAWING

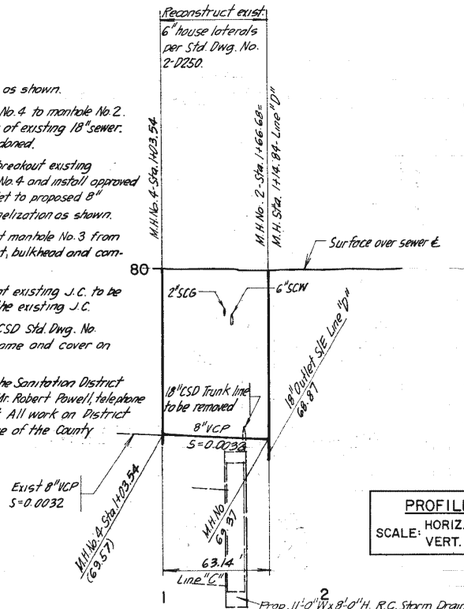
SEQUENCE OF WORK FOR THE RECONSTRUCTION OF EXISTING 18 INCH SANITATION DISTRICT SEWER AT DOTY AVENUE & 107TH ST.

During Low Flow Period and Under the Direction of the Sanitation District Representative, the Contractor Shall Comply with the Following:

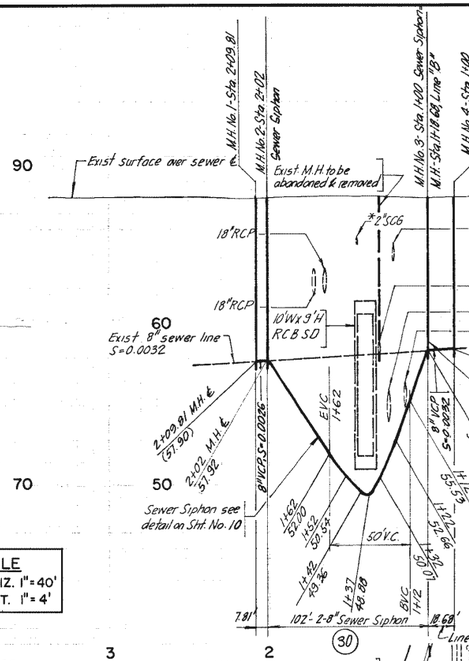
1. Construct manhole base No.1, No.3 and No.4.
2. Construct 18" VCP sewer from manhole No.1 to manhole No.3 including construction of manhole No.2, complete with channelization as shown.
3. Insert inflatable stopper in existing 18" outlet at existing J.C. to be abandoned and 8" inlet at manhole No.2
4. Breakout existing portions of 18" sewer within manhole No.1 and manhole No.3. Install approved flexible connection at manhole No.1 from 18" outlet to proposed 18" inlet.
5. Construct 8" VCP sewer from manhole No.4 to manhole No.2. Break and remove interfering portions of existing 18" sewer. Bulkhead existing 18" sewer to be abandoned.
6. Remove stopper at manhole No.2 and breakout existing portions of 8" sewer within manhole No.4 and install approved flexible connection from existing 8" inlet to proposed 8" outlet. Bulkhead and complete channelization as shown.
7. Install approved flexible connection at manhole No.3 from existing 18" inlet to proposed 18" outlet, bulkhead and complete channelization as shown.
8. The Contractor shall remove stopper at existing J.C. to be abandoned, dewater and abandon the existing J.C.
9. Complete manhole construction per CSD Std. Dwg. No. S-a-204. Place City of Inglewood frome and cover on manhole No. 4.
10. 48 hours prior to construction near the Sanitation District Facilities, the Contractor shall notify Mr. Robert Powell, Telephone No.714-7270, of the Sanitation District. All work on District facilities shall be done in the presence of the County Sanitation District representative.



PROFILE
SCALE: HORIZ. 1"=40'
VERT. 1"=4'

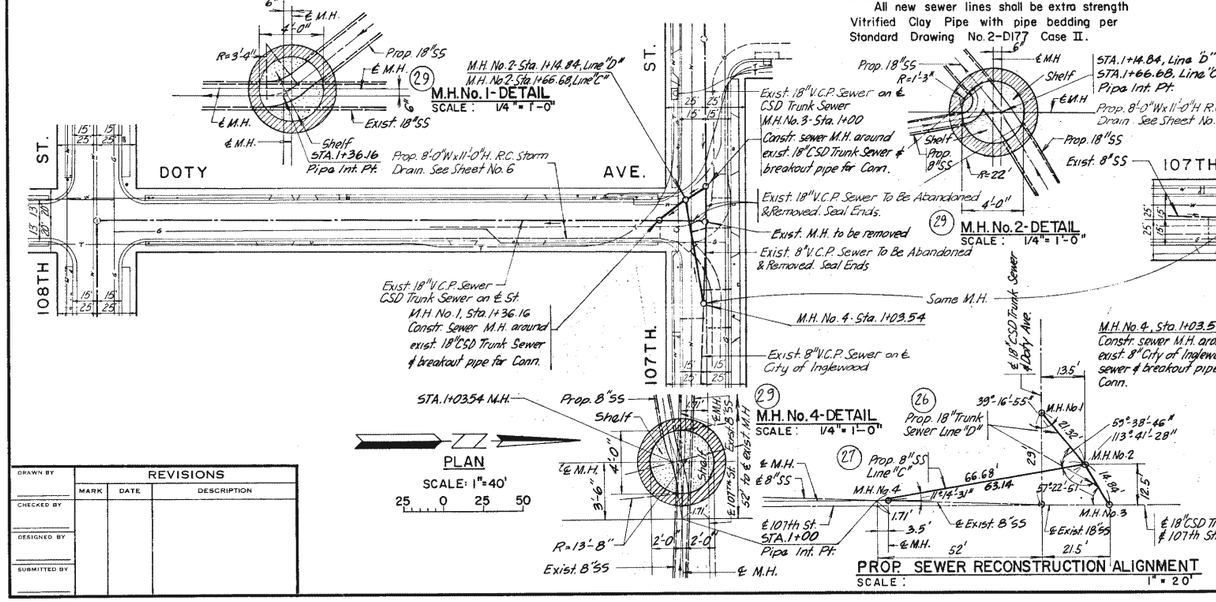


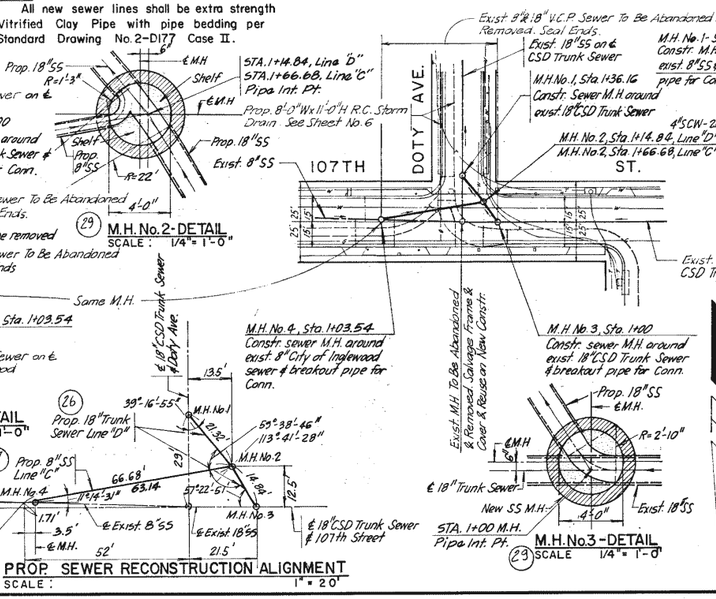
PROFILE
SCALE: HORIZ. 1"=40'
VERT. 1"=4'

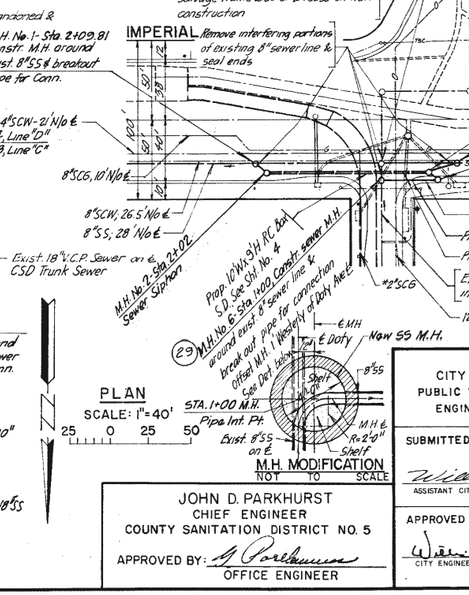


PROFILES
SCALE: HORIZ. 1"=40'
VERT. 1"=4'

NOTE:
All new sewer lines shall be extra strength Vitrified Clay Pipe with pipe bedding per Standard Drawing No. 2-D127 Case II.







DRAWN BY	REVISIONS		
	MARK	DATE	DESCRIPTION
CHECKED BY			
DESIGNED BY			
SUBMITTED BY			

JOHN D. PARKHURST
CHIEF ENGINEER
COUNTY SANITATION DISTRICT NO. 5
APPROVED BY: _____
OFFICE ENGINEER

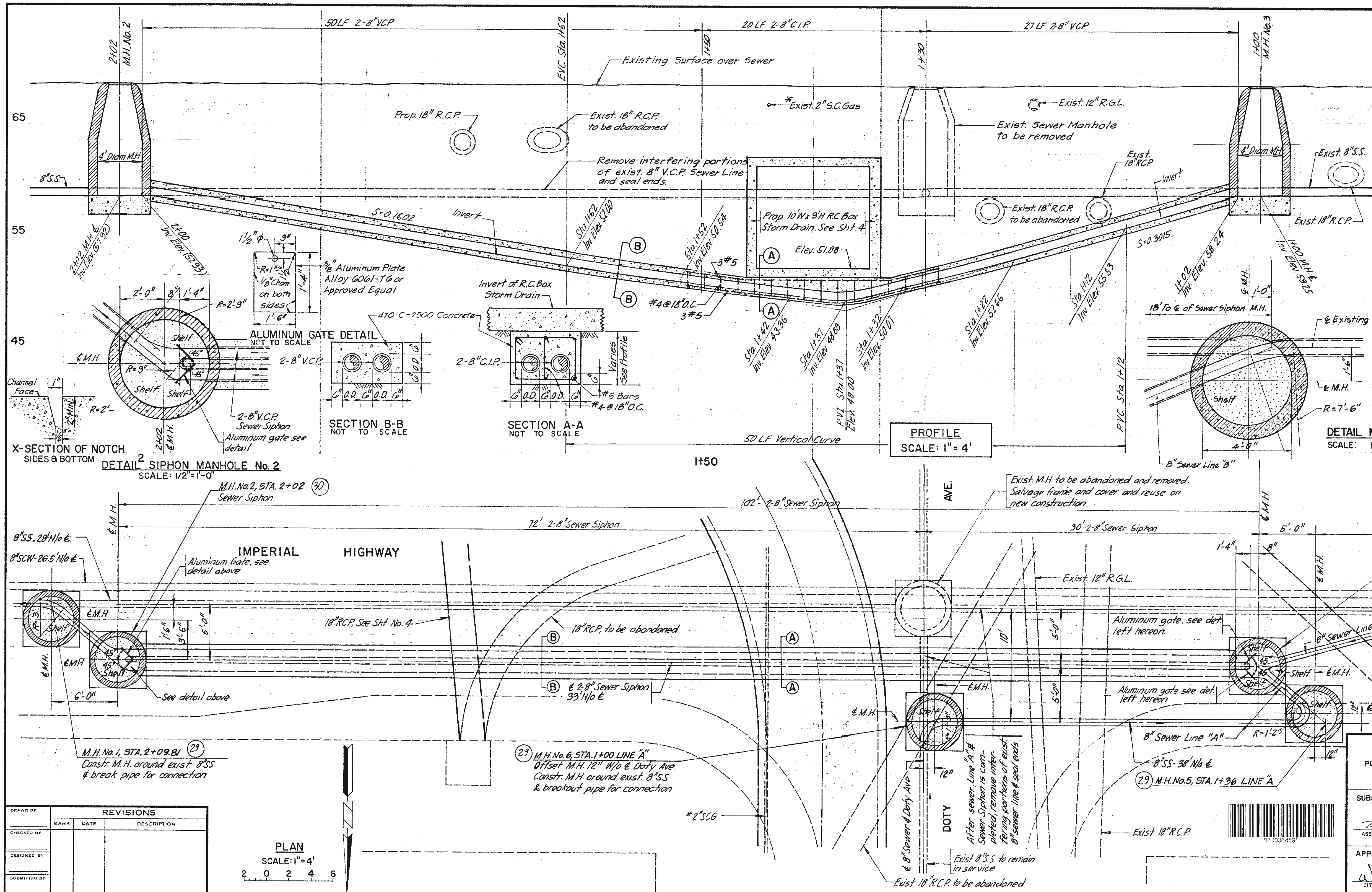
CITY OF INGLEWOOD
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION
SUBMITTED BY:
William J. Maher
ASSISTANT CITY ENGINEER R.C.E. 17167
APPROVED BY:
William J. Maher 1-3-74
CITY ENGINEER R.C.E. 11837 DATE

1964 STORM DRAIN BOND ISSUE

LOS ANGELES COUNTY
FLOOD CONTROL DISTRICT
PROJECT NO. 4401
INGLEWOOD
SANITARY SEWER RECONSTRUCTION
UNIT I
COUNTY SANITATION DISTRICT TRUNK SEWER
SEWER SIPHON AND SEWER LINE A
STA. 1+00 TO STA. 2+09.81
STA. 1+00 TO STA. 1+43.81
PLAN AND PROFILE
RECOMMENDED BY _____
DIVISION ENGINEER (DESIGN)

SCALE	DATE	DWG. NO. 364-4401-D6.9
AS SHOWN	SEPT 74	SHEET 9 OF 14

"AS BUILT" DRAWING



50 LF 2-8" VCP
20 LF 2-8" C.I.P.
27 LF 2-8" VCP
2+02 M.H. No. 2
EVC Sta. 1+62
1+50
1+30
1+00 M.H. No. 3
Existing Surface over Sewer
Exist. 2" S.C. Gas
Exist. 12" R.G.L.
Prop. 18" R.C.P.
Exist. 18" R.C.P. to be abandoned
Exist. Sewer Manhole to be removed
Remove interfering portions of exist. 8" V.C.P. Sewer Line and seal ends.
Prop. 10'W x 9'H R.C. Box Storm Drain. See Sht. 4
Elev. 51.88
Exist. 18" RCP
Exist. 18" R.C.P. to be abandoned
Exist. 8" S.S.
Exist. 18" R.C.P.
4' Diam. M.H.
8" S.S.
S=0.1602
S=0.3015
Invert
2+02 M.H. ℄ Inv. Elev. 57.92
2+00 Inv. Elev. 57.93
Sta. 1+62 Inv. Elev. 52.00
Sta. 1+52 Inv. Elev. 50.54
Sta. 1+42 Inv. Elev. 43.36
Sta. 1+37 Inv. Elev. 48.88
Sta. 1+32 Inv. Elev. 50.01
Sta. 1+22 Inv. Elev. 52.66
Sta. 1+12 Inv. Elev. 55.53
1+02 Inv. Elev. 58.24
1+00 M.H. ℄ Inv. Elev. 58.25
PVI Sta. 1+37 Elev. 48.00
PVC Sta. 1+12
50 L.F. Vertical Curve
PROFILE
SCALE: 1" = 4'
65
55
45
3/8" Aluminum Plate Alloy 6061-T6 or Approved Equal
1/8" Cham. on both sides
ALUMINUM GATE DETAIL
NOT TO SCALE
Invert of R.C. Box Storm Drain
470-C-2500 Concrete
2-8" V.C.P.
2-8" C.I.P.
#5 Bars
#4 @ 18" O.C.
Varies See Profile
SECTION B-B
NOT TO SCALE
SECTION A-A
NOT TO SCALE
#4 @ 18" O.C.
3#5
X-SECTION OF NOTCH
SIDES & BOTTOM
Channel Face
DETAIL SIPHON MANHOLE No. 2
SCALE: 1/2" = 1'-0"
2-8" V.C.P. Sewer Siphon
Aluminum gate see detail
Shelf
R=2'-9"
18' To ℄ of Sewer Siphon M.H.
℄ Existing 8" SS
℄ M.H.
R=7'-6"
8" Sewer Line "B"
DETAIL M.H. No. 4
SCALE: 1/2" = 1'-0"
1+50
M.H. No. 2, STA. 2+02 (30) Sewer Siphon
102'-2-8" Sewer Siphon
72'-2-8" Sewer Siphon
30'-2-8" Sewer Siphon
IMPERIAL HIGHWAY
8" SS-28' N/o ℄
8" SCW-26.5' N/o ℄
Aluminum Gate, see detail above
18" RCP, See Sht. No. 4
18" RCP, to be abandoned
℄ 2-8" Sewer Siphon 33' N/o ℄
See detail above
Exist. M.H. to be abandoned and removed. Salvage frame and cover and reuse on new construction.
AVE.
Exist. 12" R.G.L.
Aluminum gate, see det. left hereon.
Aluminum gate see det. left hereon
(30) M.H. No. 3, STA. 1+00 Sewer Siphon = M.H. STA. 1+43.81 LINE "A" = M.H. STA. 1+18.68 LINE "B"
(29) M.H. No. 4, STA. 1+00 LINE "B" Constr. M.H. around exist. 8" SS & break pipe for Conn.
8" SCW-26.5' N/o ℄
8" Sewer Line "B"
8" SS-28' N/o ℄
℄ Sewer Siphon
Exist. 18" Storm drain
6" SCW
8" Sewer Line "A"
8" SS-38' N/o ℄
(29) M.H. No. 5, STA. 1+36 LINE "A"
M.H. No. 1, STA. 2+09.81 (29) Constr. M.H. around exist. 8" SS & break pipe for connection
(29) M.H. No. 6, STA. 1+00 LINE "A" Offset M.H. 12" W/o ℄ Doty Ave. Constr. M.H. around exist. 8" SS & breakout pipe for connection
*2" SCG
DOTY
℄ 8" Sewer ℄ Doty Ave.
After sewer Line "A" & Sewer Siphon is completed, remove interfering portions of exist. 8" sewer line & seal ends.
Exist. 8" S.S. to remain in service
Exist. 18" R.C.P. to be abandoned
Exist. 18" R.C.P.
PLAN
SCALE: 1" = 4'

GENERAL NOTES: (Applicable to City of Inglewood Sewer Reconstruction and Sewer Siphon Sht. 9 and 10)

1. Use Std. City of Inglewood Dwgs. for reconstruction of City of Inglewood sewer lines.
2. Use extra strength vitrified clay pipes, unglazed, bell and spigot, conforming to ASTM C700. Joints shall be type "F" or "G" per standard specifications. For C.I.P. use Class 150 per Std. Specifications.
3. All structures shall be either brick manhole or precast concrete manhole per Std. Dwg.
4. Use Std. M.H. Frame and Cover per Std. Dwg. S-35
5. Abandoned sewers shall be sealed with brick and cement mortar.
6. Resurface trenches within the paved area of street as noted on the storm drain plans.
7. Refer to Std. Specifications and Special Provisions for sewer testing for sewer leakage.
8. All joints between cast iron pipe and vitrified clay pipe shall be made with rubber sleeve joint, type "C" or "D" (with bushing if necesary) per standard specifications.

REVISIONS			
	MARK	DATE	DESCRIPTION
DRAWN BY			
CHECKED BY			
DESIGNED BY			
SUBMITTED BY			

1964 STORM DRAIN BOND ISSUE

CITY OF INGLEWOOD
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION

SUBMITTED BY:
William J. Maher
ASSISTANT CITY ENGINEER R.C.E. 17167

APPROVED BY:
1-31-74
CITY ENGINEER R.C.E. 11237 DATE

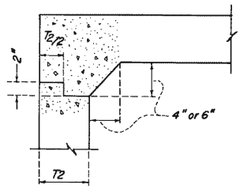
LOS ANGELES COUNTY
FLOOD CONTROL DISTRICT

PROJECT NO. 4401
INGLEWOOD
SANITARY SEWER RECONSTRUCTION
UNIT 1
SEWER SIPHON
STA. 1+00 TO STA. 2+02
PLAN AND PROFILE

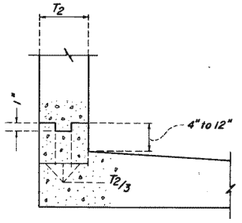
RECOMMENDED BY
DIVISION ENGINEER (DESIGN)

SCALE	DATE	DWG. NO. 364-4401-D6.10
AS SHOWN	SEPT 74	SHEET 10 OF 14

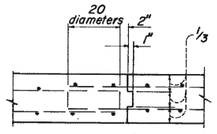
"AS BUILT" DRAWING



TOP OF WALL

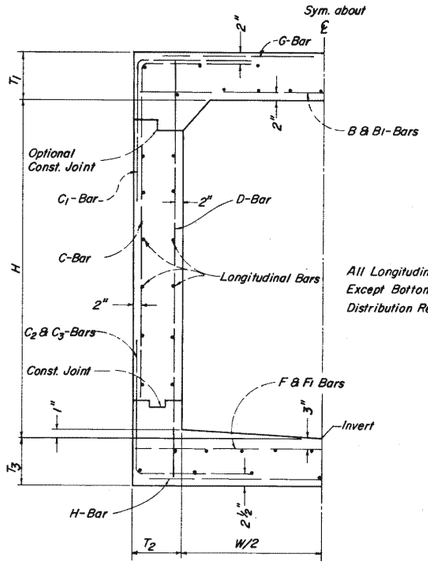


BASE OF WALL



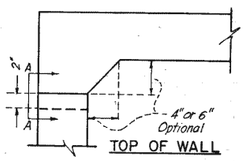
TRANSVERSE JOINT

CONSTRUCTION JOINT DETAILS
NO SCALE

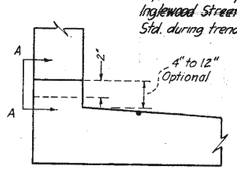


All Longitudinal Bar Spacing 18" c.-c., Except Bottom Face of Top Slab with Distribution Reinforcement.

TYPICAL R.C. BOX SECTION
NO SCALE



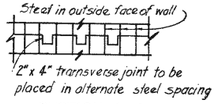
TOP OF WALL



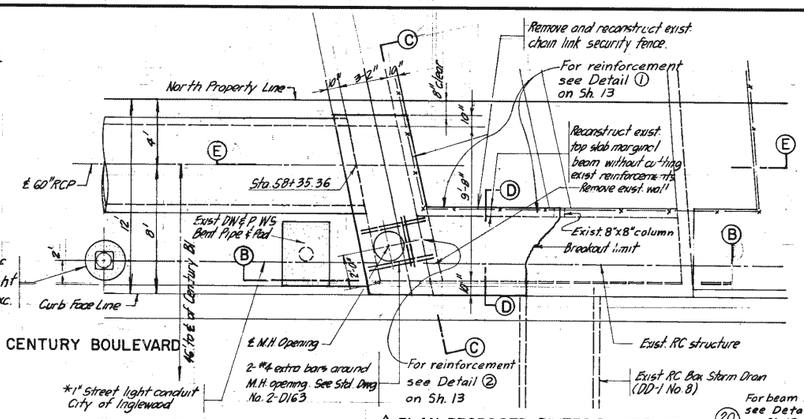
BASE OF WALL

CONSTRUCTION JOINT DETAILS FOR BOXES JACKED IN PLACE

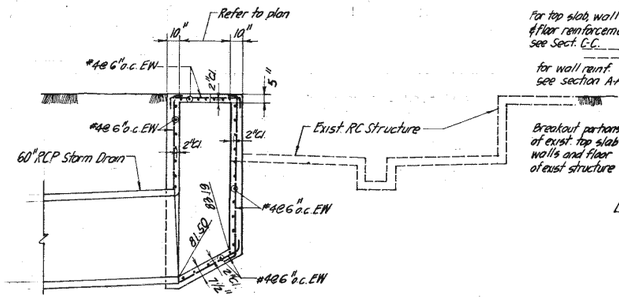
Refer to Std. Dwg. No. 2-D465 for additional steel details



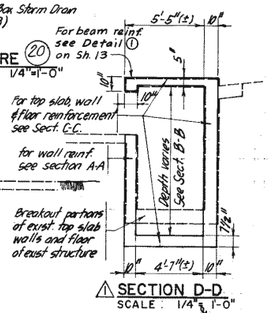
SECTION A-A

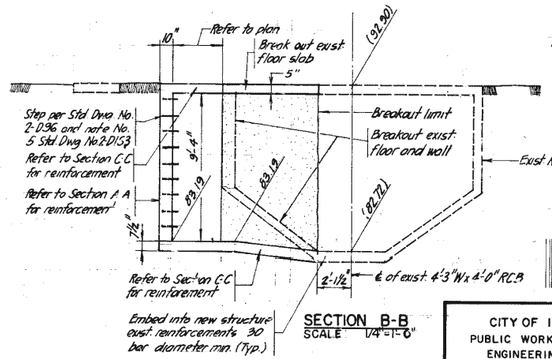


⚠ PLAN-PROPOSED DIVERSION STRUCTURE (20)
SCALE 1/4"=1'-0"



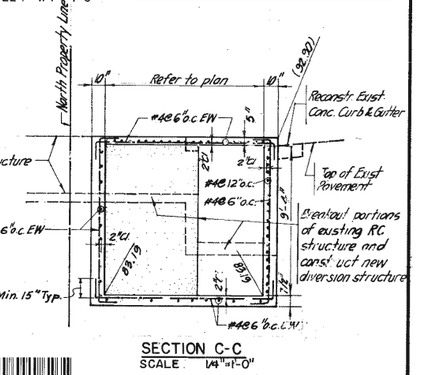
⚠ SECTION D-D
SCALE 1/4"=1'-0"





⚠ SECTION E-E
SCALE 1/4"=1'-0"

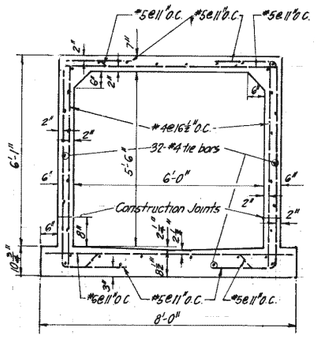
SECTION B-B
SCALE 1/4"=1'-0"



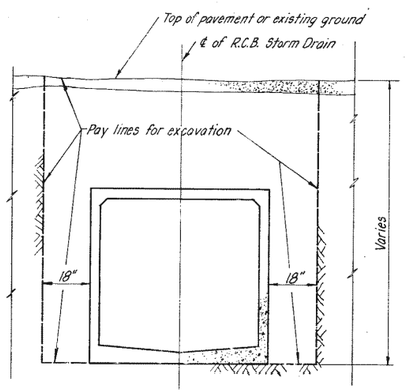
SECTION C-C
SCALE 1/4"=1'-0"

REINFORCED CONCRETE BOX LOCATION SCHEDULE

LINE A		
BOX SECTION	STATION FROM	STATION TO
A	1+00	1+74.70
B	1+89.70	2+91.77
B	3+00	10+60
C	10+70	19+00
D	19+00	26+43
E	26+67	26+77
F	27+01	30+22.98
G	30+44.98	30+73.38
H	30+88.38	34+88
I	35+12	35+22
J	35+46	38+58
K	38+82	38+92
L	39+16	42+33
M	42+53	42+63
N	42+73	49+00
O	49+10	49+20
P	49+30	50+00
Q	50+00	51+30
R	51+30	55+31.52
S	55+51.52	56+07.52



SECTION Z (Refer to Sheet No. 6)
SCALE: 1/2"=1'-0"



TYPICAL SECTION SHOWING PAY LINES FOR EXCAVATION OF R.C.B.
NO SCALE

DESIGN DATA:

LIVE LOAD.
H20-S16-44 unless otherwise noted

DEAD LOAD:
Earth load per Marston's formula: W=120 PCF
Ku = Ku' = 0.150
Bd = Outside width of box plus 3 feet
Side earth W = 40 PSF per foot of depth
Internal water pressure: 62.4 p.s.f. per foot of depth
Weight of Concrete: 150 p.c.f.

ALLOWABLE STRESSES:
fc' = 4000 p.s.i. at 28 days
fc = 1800 p.s.i.
fs = 24,000 p.s.i.
n = 8
shear and bond stresses per A.C.I. 318-63

REVISIONS		
MK	DATE	DESCRIPTION
⚠1	12-9-74	Changes in Details for Diversion Structure

INITIAL DATE
DESIGNED BY
DRAWN BY
CHECKED BY
SUPERVISED BY
PROJECT ENGR.

CITY OF INGLEWOOD
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION

SUBMITTED BY: W. William J. Mahon
ASSISTANT CITY ENGINEER R.C.E. 17167

APPROVED BY: William J. Mahon 1-31-74
CITY ENGINEER R.C.E. 11237 DATE

LOS ANGELES COUNTY FLOOD CONTROL DISTRICT

PROJECT NO. 4401
INGLEWOOD
SINGLE R.C. BOX UNIT I
SCHEDULE & DETAILS

RECOMMENDED BY: Dpmilne
DIVISION ENGINEER (DESIGN)

DATE Sept. 74 SCALE AS SHOWN

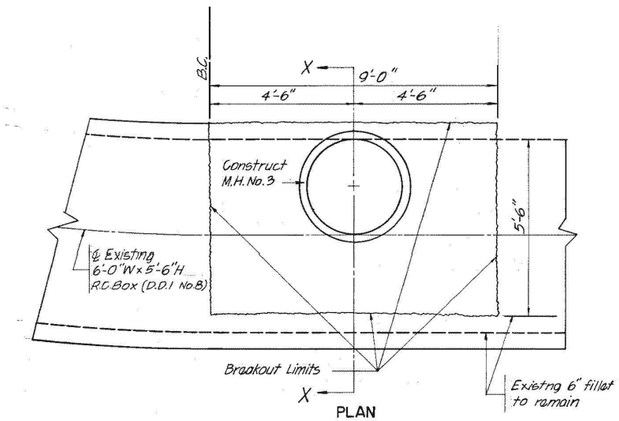
NO. 364-4401-D6.11

SHEET 11 OF 14

1964 STORM DRAIN BOND ISSUE

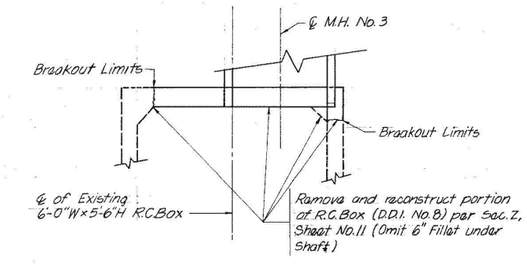
"AS BUILT" DRAWING

BOX SECTION		A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y
Design Cover (ft.)		4.2'	7.8'	8.8'	10.1'	13.0'	10.1'	12.3'	9.1'	11.0'	9.2'	12.0'	9.5'	10.5'	9.7'	11.8'	10.9'	12.9'	15.1'	16.7'	14.3'	13.0'	11.1'	8.9'	9.1'	9.7'
W	Width	7'-0"	10'-0"	8'-0"	8'-0"	11'-0"	8'-0"	11'-0"	8'-0"	11'-0"	8'-0"	11'-0"	8'-0"	9'-0"	7'-0"	9'-0"	7'-0"	7'-0"	7'-0"	9'-0'	7'-6"	7'-6"	7'-6"	7'-6"	7'-6"	7'-6"
H	Height	12'-0"	9'-0"	11'-0"	11'-0"	8'-0"	11'-0"	8'-0"	11'-0"	8'-0"	11'-0"	8'-0"	11'-0"	7'-0"	9'-0"	7'-0"	9'-0"	9'-0"	9'-0"	7'-0"	9'-0"	9'-0"	9'-0"	9'-0"	9'-0"	9'-0"
T_1	Top Slab Thickness	6.50"	9.00"	8.25"	8.00"	12.50"	8.00"	12.00"	8.25"	11.00"	8.50"	11.75"	8.50"	9.00"	7.75"	9.75"	7.75"	8.50"	9.25"	12.00"	9.50"	9.00"	8.25"	7.75"	8.00"	8.25"
T_2	Side Wall Thickness	9.00"	8.00"	8.00"	8.00"	8.75"	8.00"	8.50"	8.00"	8.25"	8.00"	8.50"	8.00"	8.00"	8.00"	8.00"	8.00"	8.00"	8.00"	8.75"	8.00"	8.00"	8.00"	8.00"	8.00"	8.00"
T_3	Bottom Slab Thickness	7.00"	10.00"	9.25"	9.25"	13.50"	9.25"	13.00"	9.25"	12.00"	9.50"	12.75"	9.75"	10.25"	8.75"	10.75"	8.75"	9.50"	10.25"	13.00"	10.50"	10.00"	9.25"	8.75"	8.75"	9.25"
B Bars	Bar No. & Spacing	#6@17"	#9@16"	#8@18"	#6@11"	#8@10"	#6@11"	#8@10"	#8@18"	#7@8"	#8@18"	#7@8"	#8@18"	#8@15"	#7@15"	#7@10"	#7@17"	#8@19"	#9@20"	#9@13"	#9@20"	#7@13	#8@19"	#6@11"	#8@19"	#8@17"
	Length, h	8'-1"	11'-1"	9'-1"	9'-1"	12'-2.5"	9'-1"	12'-2"	9'-1"	12'-1.5"	9'-1"	12'-2"	9'-1"	10'-1"	8'-1"	10'-1"	8'-1"	8'-1"	8'-1"	10'-2.5'	8'-7"	8'-7"	8'-7"	8'-7"	8'-7"	8'-7"
B_1 Bars	Bar No. & Spacing	#5@17"	#5@16"	#5@18"	#4@11"	#5@10"	#4@11"	#5@10"	#5@18"	#4@8"	#5@18"	#4@8"	#5@18"	#5@15"	#4@15"	#4@10"	#5@17"	#5@19"	#4@20"	#4@13"	#5@20"	#4@13"	#5@19"	#4@11"	#5@19"	#4@17"
	Length, h	5'-0.5"	5'-11.5"	5'-1"	5'-2"	7'-1.5"	5'-2"	6'-10.5"	5'-2"	6'-9"	5'-2"	7'-1"	5'-2.5"	5'-9"	4'-5"	5'-7"	4'-8.5"	4'-7.5"	4'-0.5"	5'-5"	4'-10.5"	4'-11"	4'-10.5"	4'-11"	4'-10.5"	4'-5.5"
C Bars	Bar No. & Spacing	#4@11"	#4@12"	#4@12"	#4@12"	#4@13"	#4@12"	#4@12"	#4@11"	#4@11"	#4@12"	#4@12"	#4@11"	#4@11"	#4@14"	#4@14"	#4@14"	#4@14"	#4@14"	#4@13"	#4@14"	#4@14"	#4@14"	#4@13"	#4@13"	#4@14"
	Horiz. Length, h	3'-5.5"	4'-2.5"	3'-8.5"	3'-8.5"	4'-6.5"	3'-8.5"	4'-6"	3'-8.5"	4'-6"	3'-8.5"	4'-6"	3'-8.5"	3'-11.5"	3'-5.5"	3'-11.5"	3'-5.5"	3'-5.5"	3'-5.5"	4'-0.5"	3'-7"	3'-7"	3'-7"	3'-7"	3'-7"	3'-7.0"
	Vert. Length, v	11'-11.5"	9'-2"	11'-1.5"	11'-1"	8'-5.5"	11'-1"	8'-5"	11'-1.5"	8'-4"	11'-1.5"	8'-5"	11'-1.5"	7'-2"	9'-1"	7'-3"	9'-1"	9'-1.5"	9'-2.5"	7'-5"	9'-2.5"	9'-2"	9'-1.5"	9'-1"	9'-1.0"	9'-1.5"
C_1 Bars	Bar No. & Spacing	#5@11"	#5@12	#6@12"	#6@12"	#5@13"	#6@12"	#5@12"	#5@11"	#5@11"	#6@12"	#5@12"	#5@11"	#4@11"	#5@14"	#5@14"	#5@14"	#5@14"	#5@14"	#4@13"	#5@14"	#5@14"	#5@14"	#5@13"	#5@13"	#5@14"
	Horiz. Length, h	2'-2.5"	1'-10"	1'-10"	1'-9"	2'-0.5"	1'-9"	1'-11.5"	1'-9"	1'-10"	1'-10"	1'-11"	1'-9.5"	1'-6.5"	1'-6.5"	1'-8"	1'-6.5"	1'-7"	1'-7.5"	1'-9"	1'-8"	1'-8"	1'-7"	1'-6.5"	1'-6.5"	1'-7.0"
	Vert. Length, v	1'-7"	3'-5"	2'-1"	2'-0.5"	2'-11.5"	2'-0.5"	2'-11.5"	2'-0"	3'-1"	2'-1"	3'-0"	2'-0.5"	2'-6.5"	1'-9.5"	2'-11"	1'-9.5"	1'-10"	1'-10.5"	2'-2"	1'-11.5"	1'-11.5"	1'-11"	1'-10.5"	1'-10.5"	1'-11"
C_2 Bars	Bar No. & Spacing	#5@11"	#5@12"	#4@12"	#4@12"	#4@13"	#4@12"	#4@12"	#4@11"	#4@11"	#4@12"	#4@12"	#4@11"	#4@11"	#4@14"	#4@14"	#4@14"	#4@14"	#4@14"	#4@13"	#4@14"	#4@14"	#4@14"	#4@13"	#4@13"	#4@14"
	Horiz. Length, h	3'-9"	4'-3.5"	3'-8.5"	3'-8.5"	4'-6.5"	3'-8.5"	4'-6"	3'-8.5"	4'-6"	3'-8.5"	4'-6"	3'-8.5"	3'-11.5"	3'-5.5"	3'-11.5"	3'-5.5"	3'-5.5"	3'-5.5"	4'-0.5"	3'-7"	3'-7"	3'-7"	3'-7"	3'-7"	3'-7.0"
	Vert. Length, v	2'-0"	2'-3"	2'-2.5"	2'-2.5"	2'-6.5"	2'-2.5"	2'-6"	2'-2.5"	2'-5"	2'-2.5"	2'-6"	2'-3"	2'-3.5"	2'-1"	2'-4"	2'-2"	2'-2.5"	2'-3.5"	2'-6"	2'-3.5"	2'-3"	2'-2.5"	2'-2"	2'-2.0"	2'-2.5"
C_3 Bars	Bar No. & Spacing	#5@11"	#4@12"	#6@12"	#6@12"	#4@13"	#6@12"	#4@12"	#6@11"	#4@11"	#6@12"	#4@12"	#5@11"	#4@11"	#5@14"	#4@14"	#5@14"	#5@14"	#5@14"	#4@13"	#5@14"	#5@14"	#5@14"	#5@13"	#5@13"	#5@14"
	Horiz. Length, h	1'-8.5"	1'-6"	2'-1"	2'-1"	1'-11"	2'-1"	1'-10"	1'-10.5"	1'-8.5"	2'-0.5"	1'-10"	1'-11"	1'-6"	1'-7.5"	1'-7.5"	1'-7.5"	1'-8"	1'-8.5"	1'-8"	1'-9"	1'-8.5"	1'-8"	1'-7.5"	1'-7.5"	1'-8"
	Vert. Length, v	1'-3"	1'-11.5"	2'-0"	2'-0.5"	2'-6.5"	2'-0.5"	2'-7.5"	2'-0"	2'-9.5"	2'-0.5"	2'-9"	2'-0"	2'-4.5"	1'-9.5"	5'-7.5"	1'-9.5"	1'-10.5"	1'-11"	1'-10.5"	1'-10.5"	1'-11"	1'-10.5"	1'-10"	1'-10"	1'-10.5"
D Bars	Bar No. & Spacing	#5@9"	#4@18"	#4@9"	#4@9"	#4@18"	#4@9"	#4@18"	#4@9"	#4@18"	#4@9"	#4@18"	#4@9"	#4@18"	#4@17"	#4@18"	#4@17"	#4@17"	#4@18"	#4@18"	#4@18"	#4@18"	#4@17"	#4@17"	#4@17"	#4@17"
	Length, v	12'-10.5"	10'-4"	12'-2.5"	12'-2.5"	9'-11"	12'-2.5"	9'-10"	12'-2.5"	9'-8"	12'-3"	9'-9.5"	12'-3"	8'-4"	10'-1.5"	8'-5.5"	10'-1.5"	10'-3"	10'-4.5"	8'-10"	10'-5"	10'-4"	10'-2.5"	10'-1.5"	10'-1.5"	10'-2.5"
F Bars	Bar No. & Spacing	#7@17"	#8@11"	#9@19"	#9@19"	#9@11"	#9@19"	#9@11"	#8@14"	#9@12"	#8@14"	#8@9"	#8@14"	#9@16"	#7@13"	#9@15"	#7@13"	#9@20"	#9@18"	#9@12"	#9@16"	#8@14"	#7@12"	#9@20"	#9@20"	#9@20"
	Length, h	8'-1"	11'-1"	9'-1"	9'-1"	12'-2.5"	9'-1"	12'-2"	9'-1"	12'-1.5"	9'-1"	12'-2"	9'-1"	10'-1"	8'-1"	10'-1"	8'-1"	8'-1"	8'-1"	10'-2.5"	8'-7"	8'-7"	8'-7"	8'-7"	8'-7"	8'-7"
F_1 Bars	Bar No. & Spacing	#5@17"	#4@11"	#5@19"	#5@19"	#5@11"	#5@19"	#5@11"	#4@14"	#5@12"	#4@14"	#4@9"	#4@14"	#5@16"	#4@13"	#5@15"	#4@13"	#5@20"	#4@18"	#4@12"	#4@16"	#4@14"	#4@12"	#5@20"	#5@20"	#5@20"
	Length, h	4'-11"	6'-0.5"	5'-3.5"	5'-3"	7'-1"	5'-3"	6'-9.5"	5'-0"	7'-1.5"	4'-11.5"	7'-1"	5'-0.5"	5'-11"	4'-9"	6'-0"	4'-8.5"	4'-9"	4'-6"	5'-9.5"	4'-5.5"	4'-11"	5'-1.5"	4'-11.5"	5'-0"	5'-1.5"
G Bars	Bar No. & Spacing	#4@11"	#4@12"	#4@12"	#4@12"	#4@13"	#4@12"	#4@12"	#4@11"	#4@11"	#4@12"	#4@12"	#4@11"	#4@11"	#4@14"	#4@14"	#4@14"	#4@14"	#4@14"	#4@13"	#4@14"	#4@14"	#4@14"	#4@13"	#4@13"	#4@14"
	Length, h	3'-6"	5'-0"	4'-0"	4'-0"	5'-6"	4'-0"	5'-6"	4'-0"	5'-6"	4'-0"	5'-6"	4'-0"	4'-6"	3'-6"	4'-6"	3'-6"	3'-6"	3'-6"	4'-6"	3'-9"	3'-9"	3'-9"	3'-9"	3'-9"	3'-9"
H Bars	Bar No. & Spacing	#5@11"		#4@12"	#4@12"	#4@13"	#4@12"	#4@12"	#4@11"	#4@11"	#4@12"	#4@12"	#4@11"	#4@11"	#4@14"	#4@14"	#4@14"	#4@14"	#4@14"	#4@13"	#4@14"	#4@14"	#4@14"	#4@13"	#4@13"	#4@14"
	Length, h	3'-6"		4'-0"	4'-0"	5'-6"	4'-0"	5'-6"	4'-0"	5'-6"	4'-0"	5'-6"	4'-0"	4'-6"	3'-6"	4'-6"	3'-6"	3'-6"	3'-6"	4'-6"	3'-9"	3'-9"	3'-9"	3'-9"	3'-9"	3'-9"
		NUMBER OF LONGITUDINAL REINFORCEMENT #4 BARS																			NO. OF LONG. REINF. #4 BARS					
Top Slab (Includes Distrib.)		13	17	14	14	19	14	19	14	19	14	19	14	16	13	16	13	13	13	16	14	14	14	14	14	14
Bottom Slab		13	16	14	14	19	14	19	14	19	14	19	14	16	13	16	13	13	13	16	14	14	14	14	14	14
Side Walls		32	24	28	28	20	28	20	28	20	28	20	28	16	24	16	24	24	24	16	24	24	24	24	24	24
TOTAL		58	57	56	56	58	56	58	56	58	56	58	56	48	50	48	50	50	50	48	52	52	52	52	52	52
		QUANTITIES																			QUANTITIES					
Concrete Cu. Yds./Lin. Ft.		0.96	1.13	1.07	1.06	1.46	1.06	1.40	1.07	1.31	1.08	1.38	1.09	0.98	0.89	1.02	0.89	0.93	0.97	1.21	1.01	0.98	0.94	0.92	0.92	0.94
Steel Lbs./Lin. Ft.		159.5	167.0	158.5	157.2	195.1	157.2	197.7	159.6	194.0	159.6	191.6	156.2	139.3	113.4	142.6	112.9	116.3	118.6	150.2	127.0	124.0	120.9	122.8	123.0	121.2
		LINE A																			LINE B					



PLAN
SCALE: 1"=2'

DETAILS OF REMOVAL AND RECONSTRUCTION OF A PORTION OF D.D.I. No.8 IN 107th. STREET
(24) (REFER TO SHEET No.6)



SECTION X-X
SCALE: 1"=2'

NOTE: Refer to Sheet 3 for Concrete Breakout Notes

1964 STORM DRAIN BOND ISSUE

DRAWN BY	REVISIONS		
CHECKED BY	MARK	DATE	DESCRIPTION
DESIGNED BY			
SUBMITTED BY			

CITY OF INGLEWOOD
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION

SUBMITTED BY:
William J. Mahan
ASSISTANT CITY ENGINEER R.C.E. 17167

APPROVED BY:
William J. Jamison 1-31-74
CITY ENGINEER R.C.E. 11237 DATE

LOS ANGELES COUNTY
FLOOD CONTROL DISTRICT

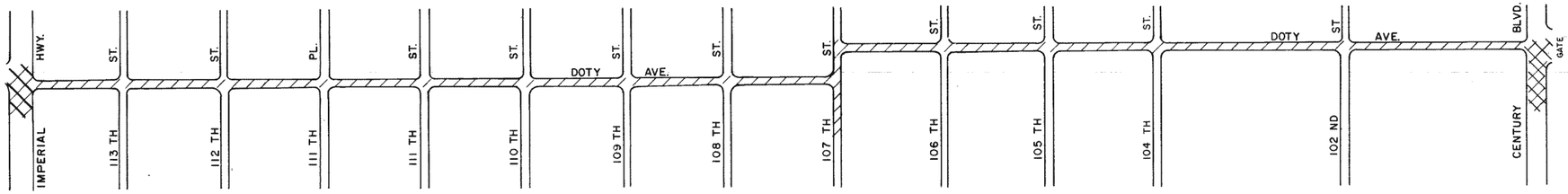
PROJECT NO. 4401
INGLEWOOD
LINE A UNIT I

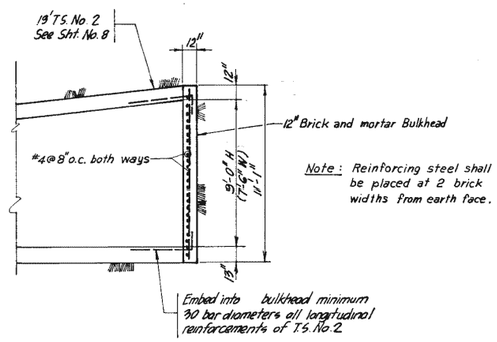
SINGLE R.C. BOX SCHEDULE

RECOMMENDED BY
DIVISION ENGINEER (DESIGN)

SCALE: AS SHOWN
DATE: SEPT 74
DWG. NO. 364-4401-D6.12
SHEET 12 OF 14

"AS BUILT" DRAWING

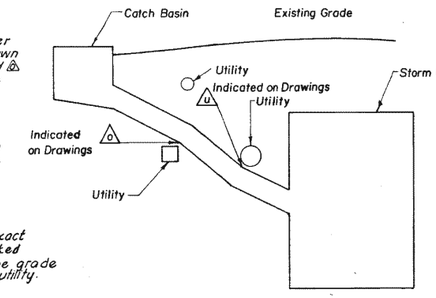




BULKHEAD DETAIL (Refer to sheet No. 8)
SCALE: 1/4" = 1'-0"

NOTES:

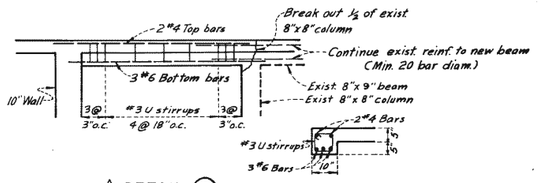
1. The change in grade of the connector pipe may occur either over or under an existing utility. The utilities at which the grade change occur are shown on the project drawings. At locations where utility crossings are marked Ⓐ the connector pipe will break over the utility. At locations where the utility crossings are marked Ⓑ the connector pipe will break under the utility.
2. On those connector pipes where change of grade is not indicated, it is assumed that the connector pipe can be laid on a straight grade from the catch basin to the storm drain without interference with utilities.
3. Where connector pipe has a change of grade exceeding 1/10 IFT or differs in diameter from that of existing pipe, use concrete collar per standard DWG. 2-D393.
4. The Contractor shall make exploratory excavation to determine the exact location and depth of utilities except sanitary sewers which are marked Ⓐ or Ⓑ. After the exact location of a utility has been determined, the grade and alignment of the connector pipe will be staked so as to clear the utility.



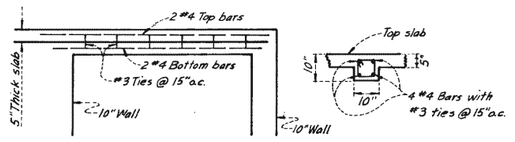
TYPICAL CONNECTOR PIPE PROFILE
NO SCALE

Pavement Reconstruction Legend

Existing Section		Reconstruction Section
3" A.C. over 6" A.B.		4" A.C. over 6" C.A.B.
2" A.C. over 4" Base		3" A.C. over 4" C.A.B.
6" A.C. over 8" A.B.		6" A.C. over 8" C.A.B.
5" A.C. over 12" A.B.		6" A.C. over 12" C.A.B.



Ⓐ DETAIL (1)
NOT TO SCALE



Ⓐ DETAIL (2)
NOT TO SCALE

SCALE: 1" = 200'
200 100 0 200 400

REVISIONS		
MK	DATE	DESCRIPTION
Ⓐ	12-9-74	Addition of Details

DESIGNED BY
DRAWN BY
CHECKED BY
SUPERVISED BY PROJECT ENGR.
INITIAL DATE

1964 STORM DRAIN BOND ISSUE

CITY OF INGLEWOOD
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION

SUBMITTED BY: William Mahar
ASSISTANT CITY ENGINEER R.C.E. 17167

APPROVED BY: 1-31-74
CITY ENGINEER R.C.E. 11237 DATE

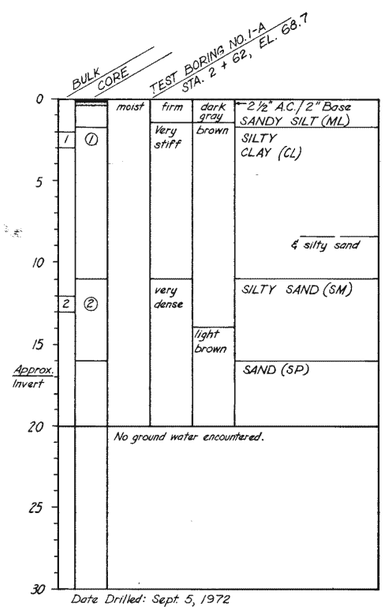
LOS ANGELES COUNTY FLOOD CONTROL DISTRICT

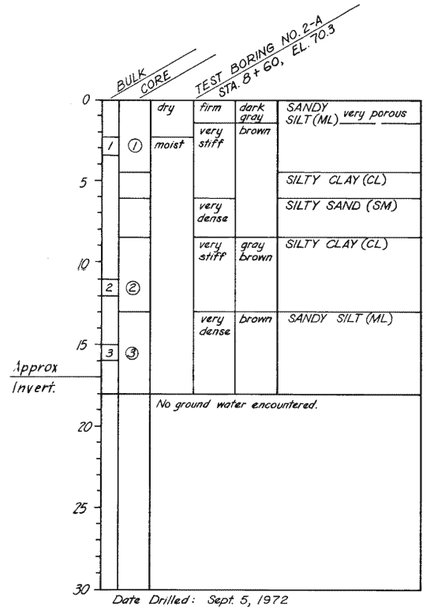
PROJECT NO. 4401
INGLEWOOD
RESURFACING PLAN UNIT I

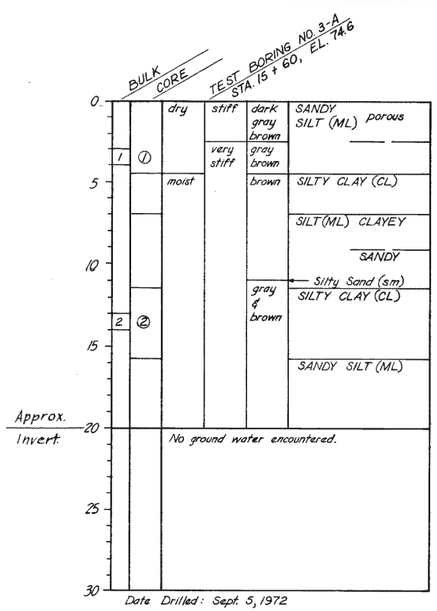
RECOMMENDED BY
DIVISION ENGINEER (DESIGN)

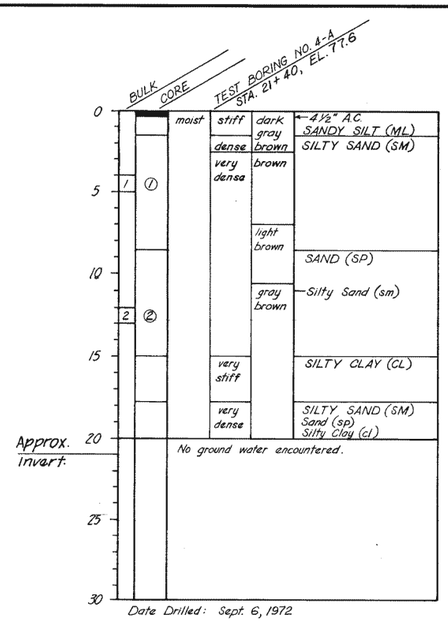
DATE SEPT. 74 SCALE AS SHOWN
NO. 364-4401-D6.13
SHEET 13 OF 14

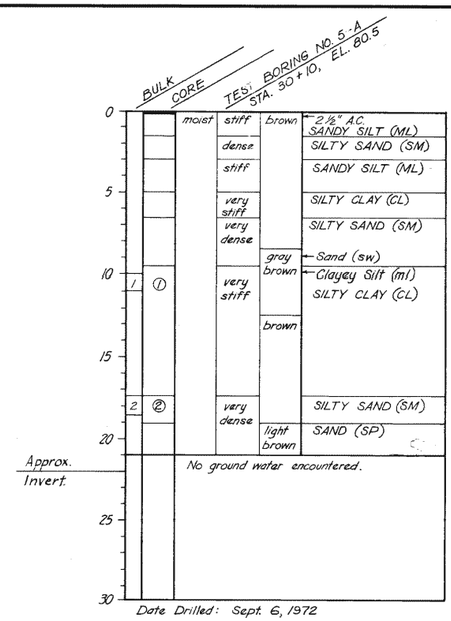
"AS BUILT" DRAWING

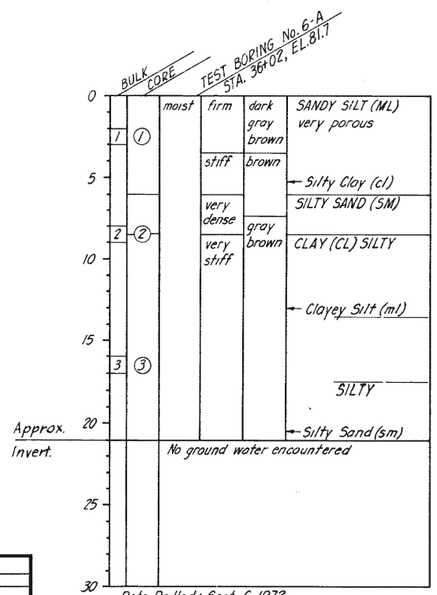


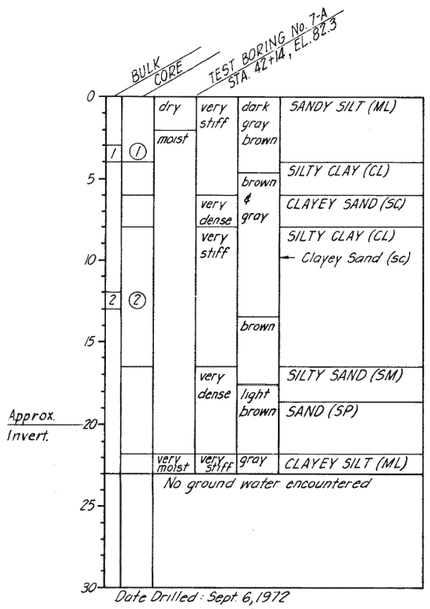


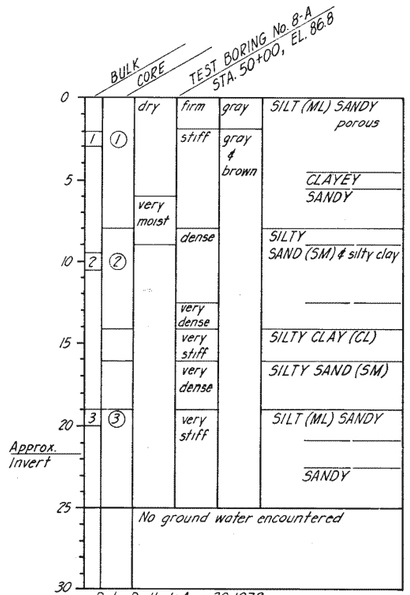


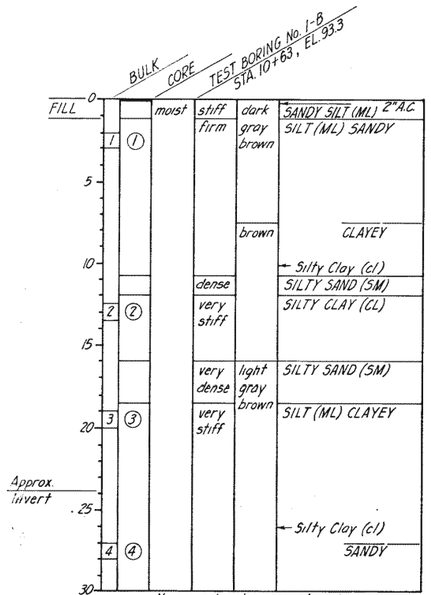












NOTES:

1. Soil classification was made in accordance with the Unified Soil Classification System shown on Std. Dwg. No. 2-D413.
2. Borings were drilled with an 18" diameter Truck-Mounted Rotary Bucket Auger.
3. Approximate invert elevations shown above Supersedes Soils Report.

REVISIONS		
MK	DATE	DESCRIPTION

INITIAL DATE
DESIGNED BY
DRAWN BY
CHECKED BY
SUPERVISED BY
PROJECT ENGR.

CITY OF INGLEWOOD
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION

SUBMITTED BY: William J. Mahar
ASSISTANT CITY ENGINEER R.C.E. 17167

APPROVED BY: [signature] 1-31-74
CITY ENGINEER R.C.E. 11237 DATE

P2003403

1964 STORM DRAIN BOND ISSUE

LOS ANGELES COUNTY FLOOD CONTROL DISTRICT

PROJECT NO. 4401
INGLEWOOD
LINE A UNIT I
LOG OF BORINGS

RECOMMENDED BY: [signature]
DIVISION ENGINEER (DESIGN)

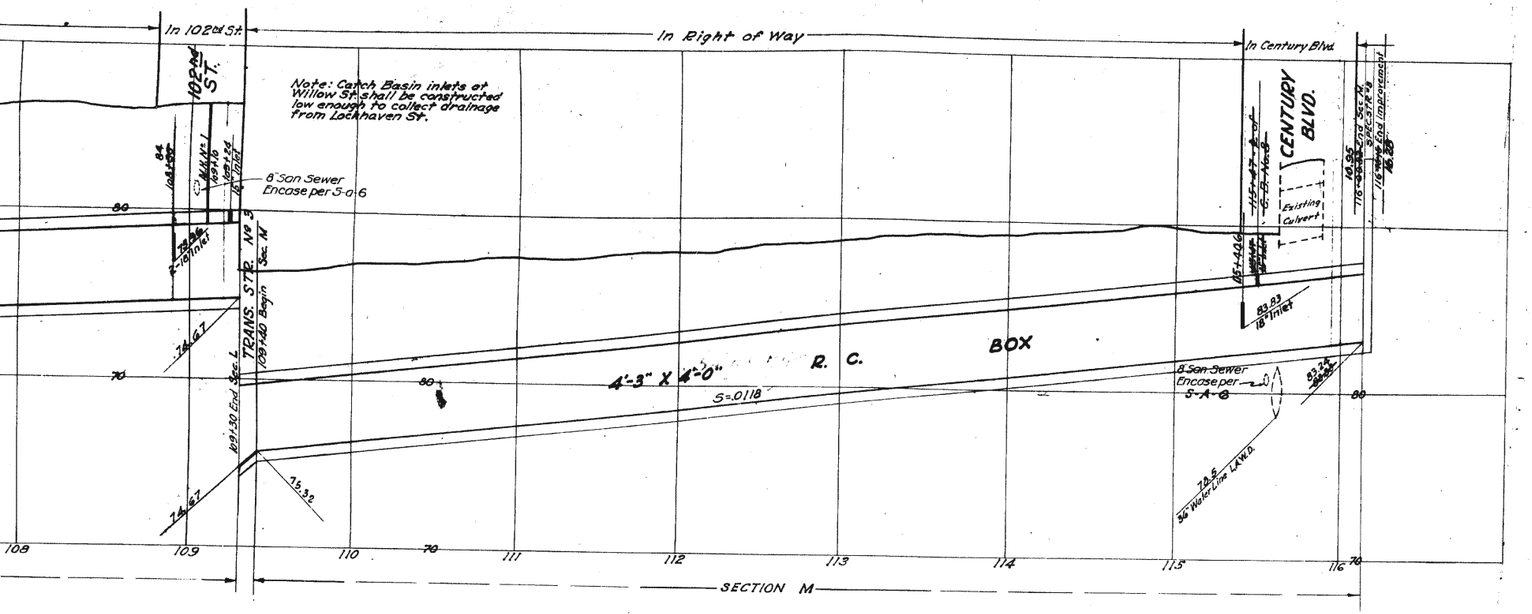
DATE SEPT 74 | SCALE AS SHOWN

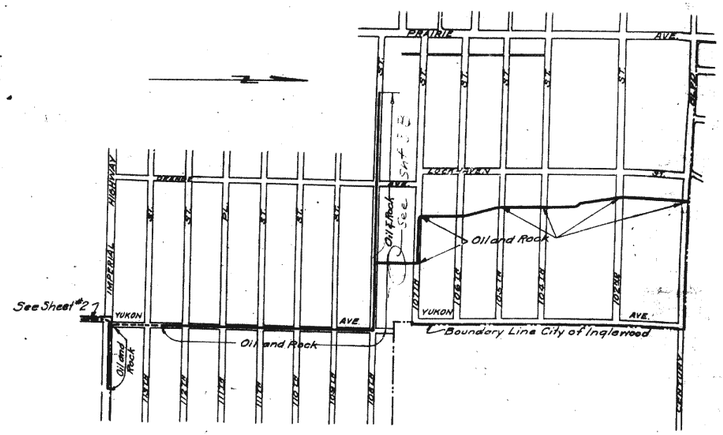
NO. 364-4401-D6 14

SHEET 14 OF 14

AS BUILT DRAWING

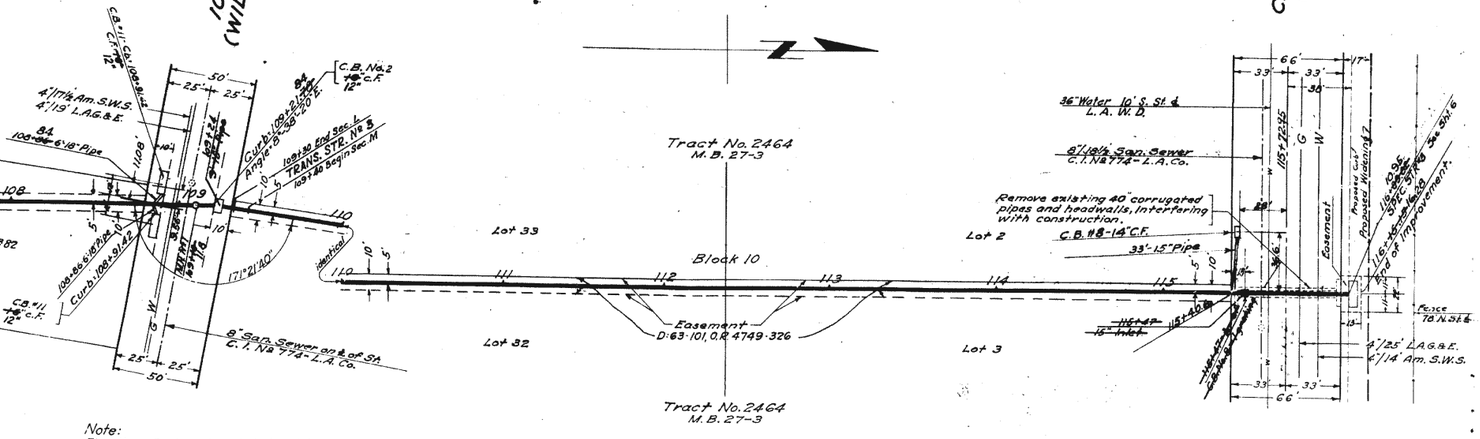

LEGEND
MANHOLE
MANHOLE - UNABLE TO LOCATE
CATCH BASIN
C.B. - MAINTAINED BY OTHERS
MAINTAINED BY OTHERS
SCALE OF FEET
LENNOX SYSTEM
PINE HAWTHORNE SYSTEM
CITY OF LOS ANGELES
COUNTY OF LOS ANGELES
INGLEWOOD
HAWTHORNE
D.D.I. NO. 8
SHOWING
MANHOLES & CATCH BASINS
LOS ANGELES COUNTY FLOOD CONTROL DISTRICT





KEY MAP
SHOWING DRAINS AND RESURFACING

111-FD 7.3



Note:
Elevations for top of curb to be determined in field, making top of curb at catch basins 4" higher than crown of street.

LINE

NOTES:

Elevations are in feet above U.S.G.S. or mean Sea Level Datum.

Stations of inlets and junctions refer to the intersections of the center lines of the inlets with the center line of the main drain.

Elevations of all inlets except catch basin inlets into box sections refer to the flow lines of the inlets produced on their gradients to the vertical plane thru the center line of the main drain. Elevations of catch basin inlets into box sections refer to the intersections of the flow lines of these inlets with the inside wall of the box section.

For details of all standard structures see Standard Plans.

All pipe not otherwise specified shall be plain cement pipe.

All stubs to be one length of pipe with ends sealed with 2" red wood planking, unless otherwise specified.

Catch basins shall be built with a curb face of 10" or more which shall include a minimum depression at opening of 4" below gutter grade, unless otherwise specified.

Sanitary sewers crossing over or with a clearence of 1.50 feet or less under Storm Drain, shall be constructed or reconstructed as shown on Standard Dr. 58.

All reinforced concrete structures shall be of Class "A-1" Concrete.

Weep holes ¾" in diameter shall be placed in each sidewall and spaced not more than five feet each way.

LENNOX DRAINAGE SYSTEM
OF THE COUNTY OF LOS ANGELES, CALIF.
PLAN AND PROFILE OF
YUKON AVENUE LINE
108TH. ST. BRANCH
IMPERIAL HWY. BRANCH

SHEET 3 OF 10 SHEETS

SCALE VERT. 1" = 4' HORIZ. 1" = 40' NOVEMBER 1

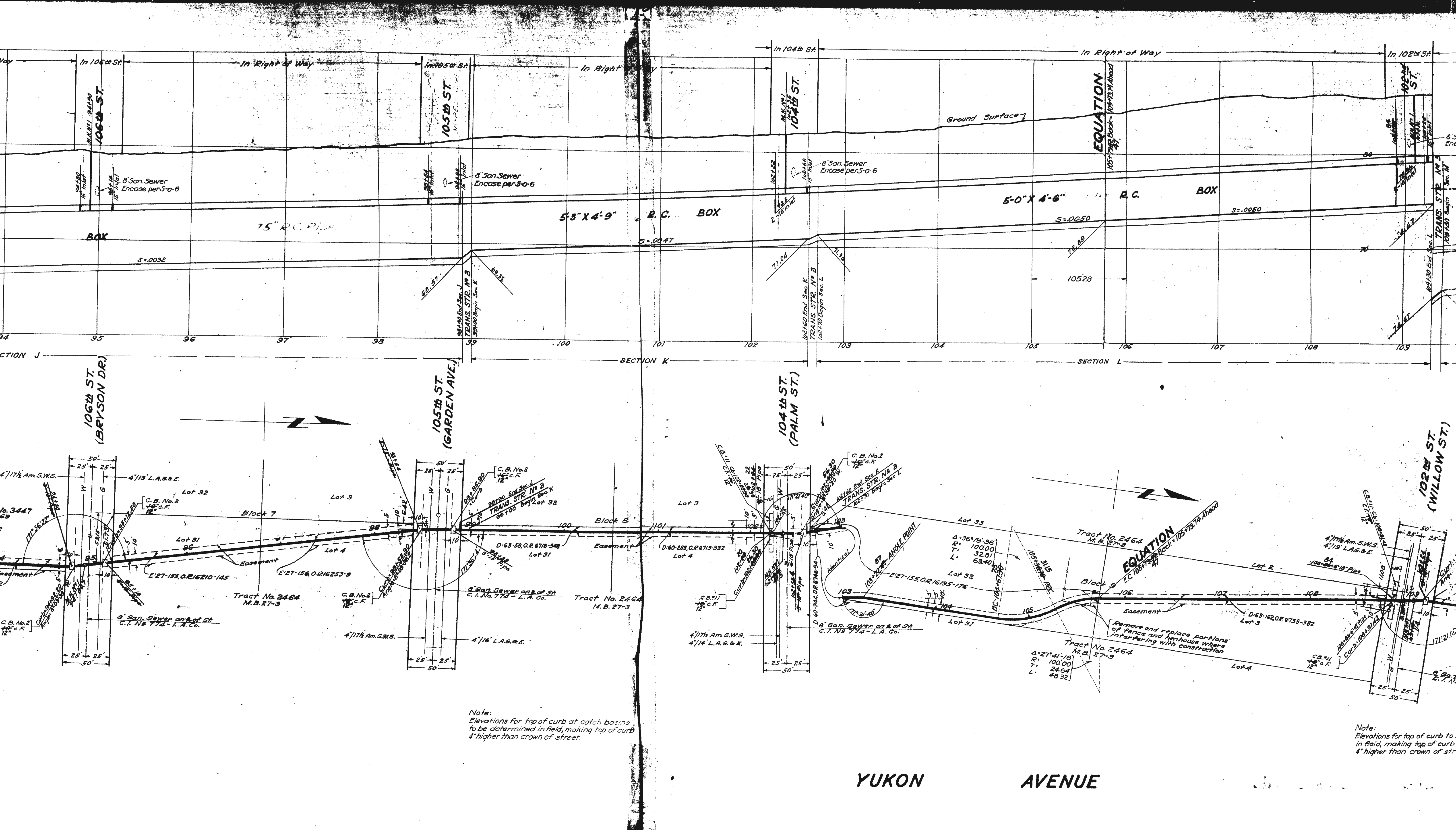
ALFRED JONES COUNTY SURVEYOR

RECOMMENDED B.E. Hamel CHIEF DEPUTY APPROVED [illegible] COUNTY ENGINEER

Corrected as constructed by A.W. Lynn 8-7-42
Checked by L.O. Lanphere 8-11-42

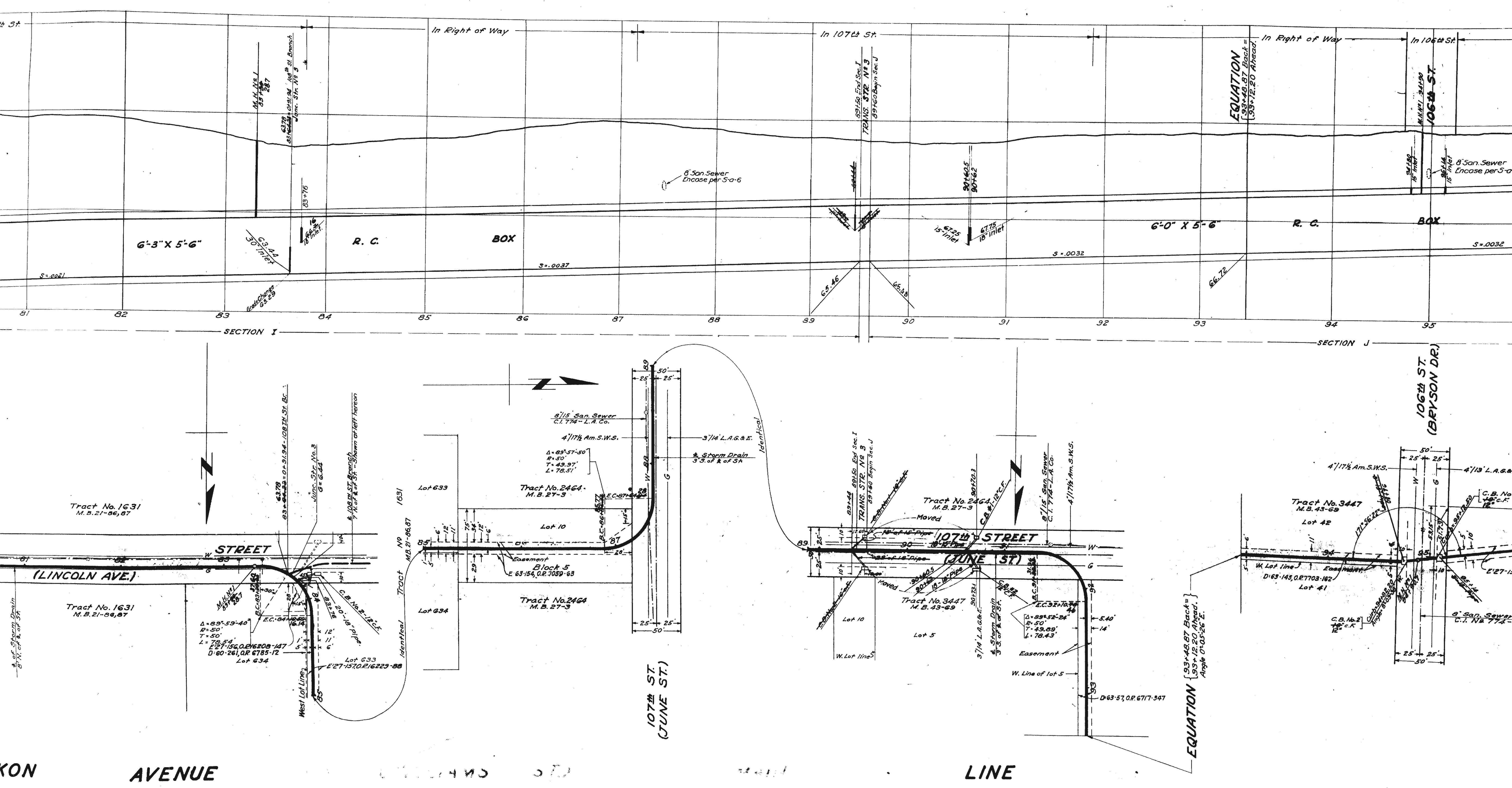
REFERENCE			DESIGNED	J.H. Hartley
F.B.	228			
L.B.	289		TRACED	P.C. Glenn
Yukon Ave. Line		Revised 6-7-37		
		" 7-25-38	CHECKED	J.H. Rice
		" 10-31-38		

F 1

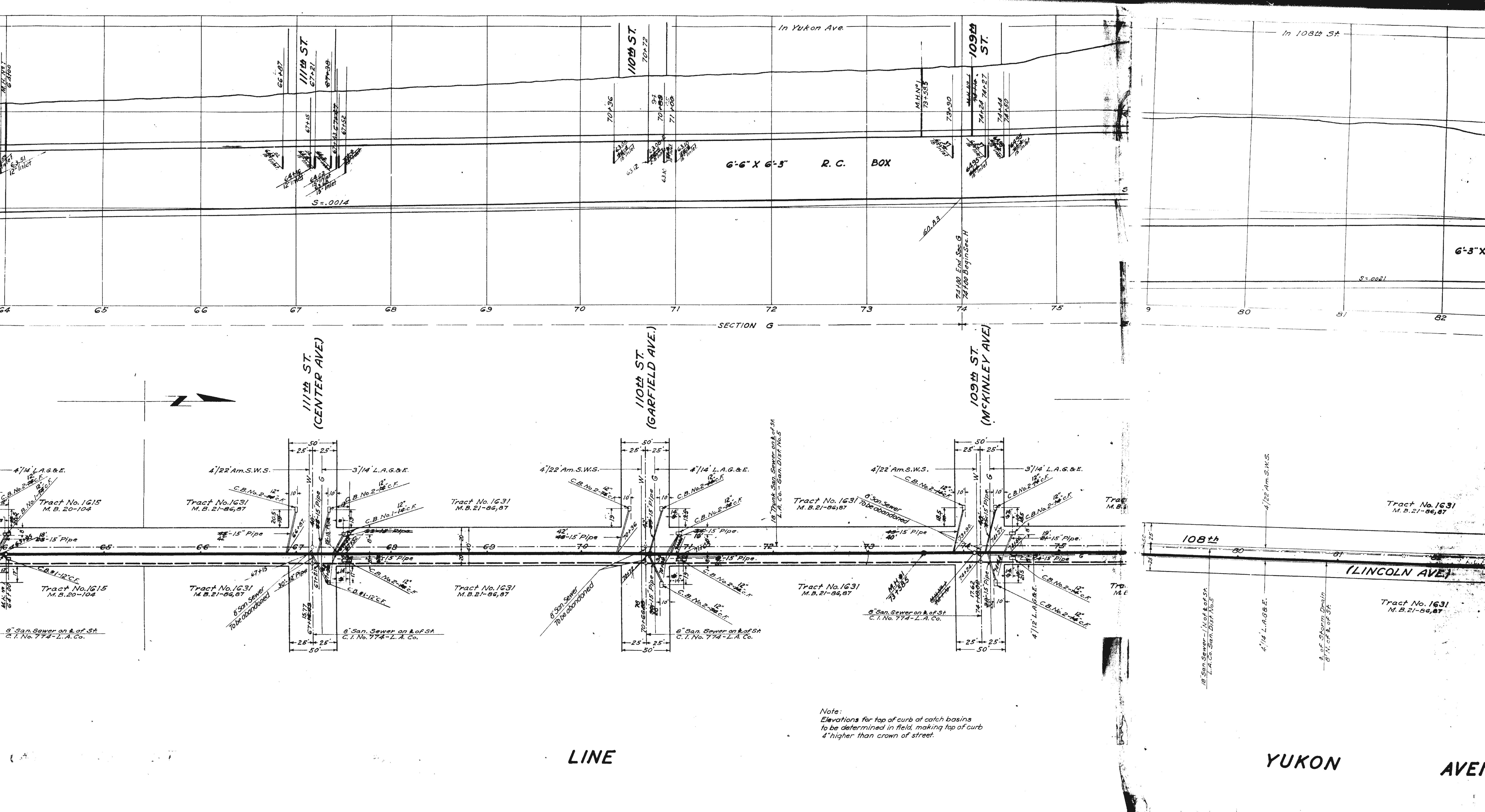


In 106th St.
In Right of Way
In 105th St.
In 104th St.
In 102nd St.
106th ST.
105th ST.
104th ST.
102nd ST.
EQUATION
Ground Surface
8" San. Sewer Encase per S-a-6
5'-3" X 4'-9" R.C. BOX
5'-0" X 4'-6" R.C. BOX
BOX
S=.0032
S=.0047
S=.0050
TRANS. STR. No 3
SECTION J
SECTION K
SECTION L
106th ST. (BRYSON DR.)
105th ST. (GARDEN AVE.)
104th ST. (PALM ST.)
102nd ST. (WILLOW ST.)
C.B. No.2
Block 7
Block 8
Block 9
Lot 31
Lot 32
Lot 3
Lot 4
Lot 33
Lot 2
Easement
Tract No. 2464 M.B. 27-3
8" San. Sewer on ℄ of St. C.I. No 774 - L.A. Co.
4'/17½ Am. S.W.S.
4'/16' L.A.G.& E.
ANGLE POINT
Remove and replace portions of fence and henhouse where interfering with construction
Note: Elevations for top of curb at catch basins to be determined in field, making top of curb 4" higher than crown of street.
YUKON AVENUE

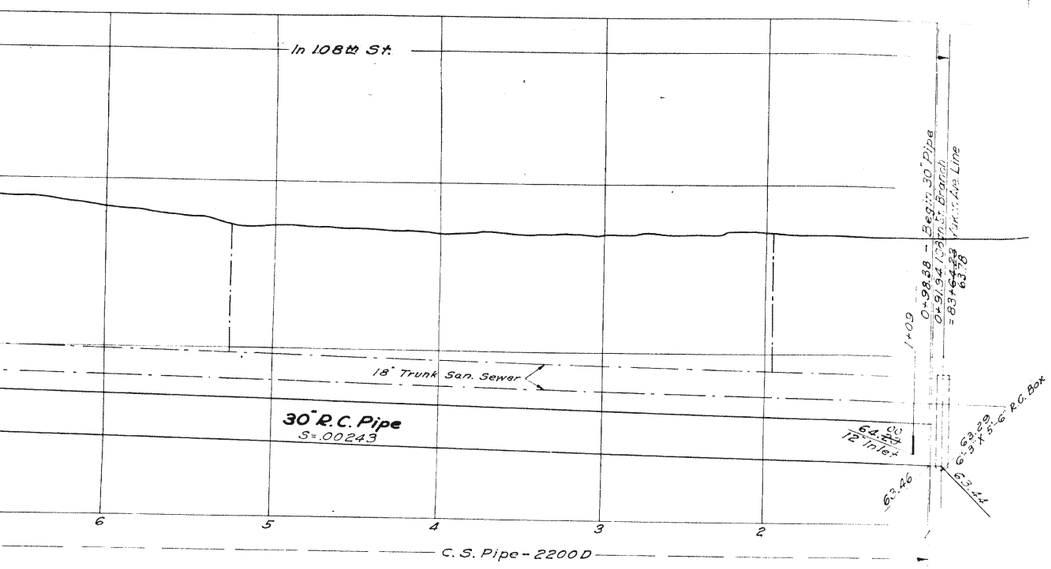
F2

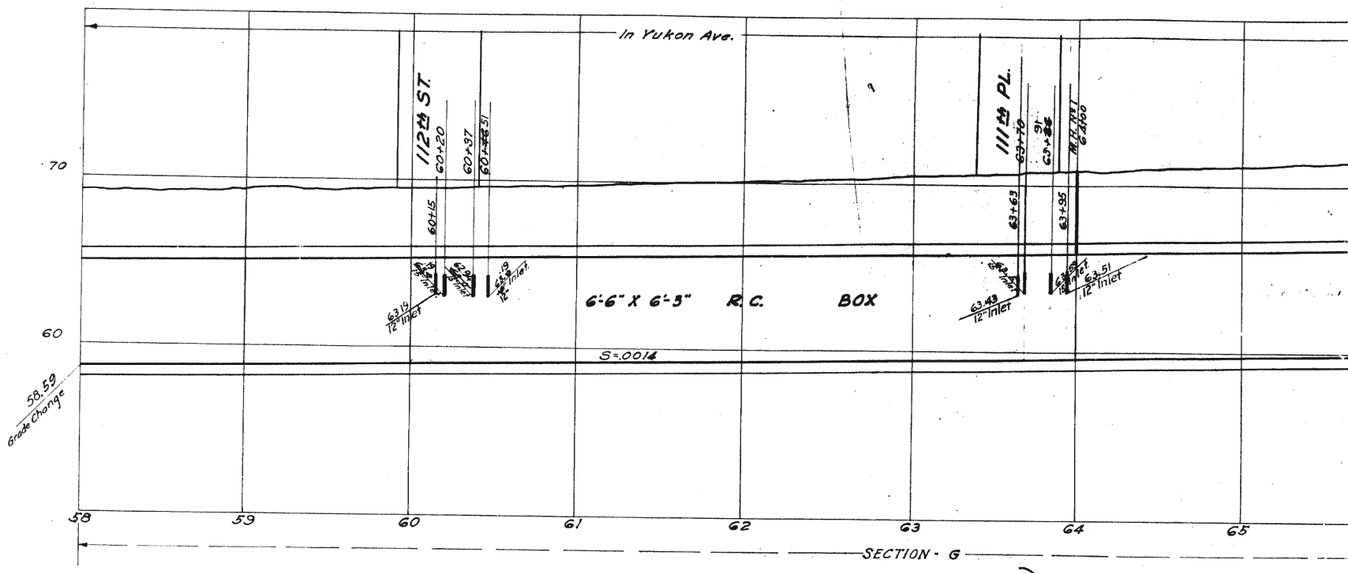

In Right of Way
In 107th St.
In Right of Way
In 106th St.
EQUATION 93+48.87 Back= 93+12.20 Ahead
TRANS. STR. No 3
106th ST.
8" San. Sewer Encase per S-o-6
6'-3" X 5'-6"
R. C.
BOX
6'-0" X 5'-6"
R. C.
BOX
S=.0021
S=.0037
S=.0032
S=.0032
81
82
83
84
85
86
87
88
89
90
91
92
93
94
95
SECTION I
SECTION J
Tract No. 1631 M.B. 21-86,87
STREET
(LINCOLN AVE.)
Tract No. 1631 M.B. 21-86,87
Lot 634
Lot 633
Lot 10
Block 5
Tract No. 2464 M.B. 27-3
Tract No. 2464 M.B. 27-3
Lot 634
Identical
107th ST. (JUNE ST.)
107th STREET
(JUNE ST.)
Tract No. 2464 M.B. 27-3
Tract No. 3447 M.B. 43-69
Lot 10
Lot 5
Easement
W. Line of lot 5
106th ST. (BRYSON DR.)
Tract No. 3447 M.B. 43-69
Lot 42
Lot 41
EQUATION 93+48.87 Back= 93+12.20 Ahead. Angle 0°05'26" E.
KON
AVENUE
LINE

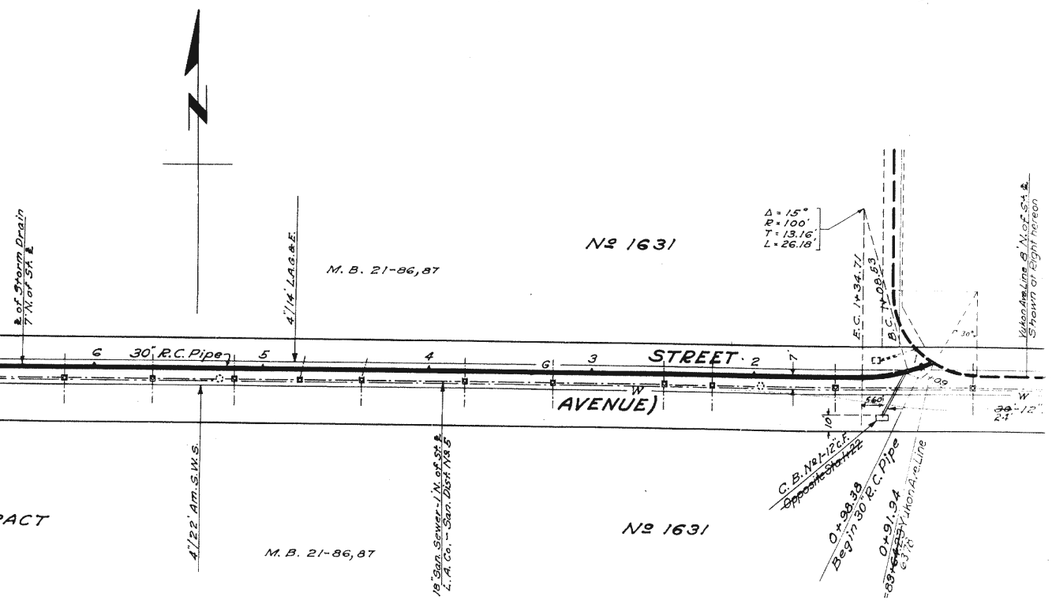
F3

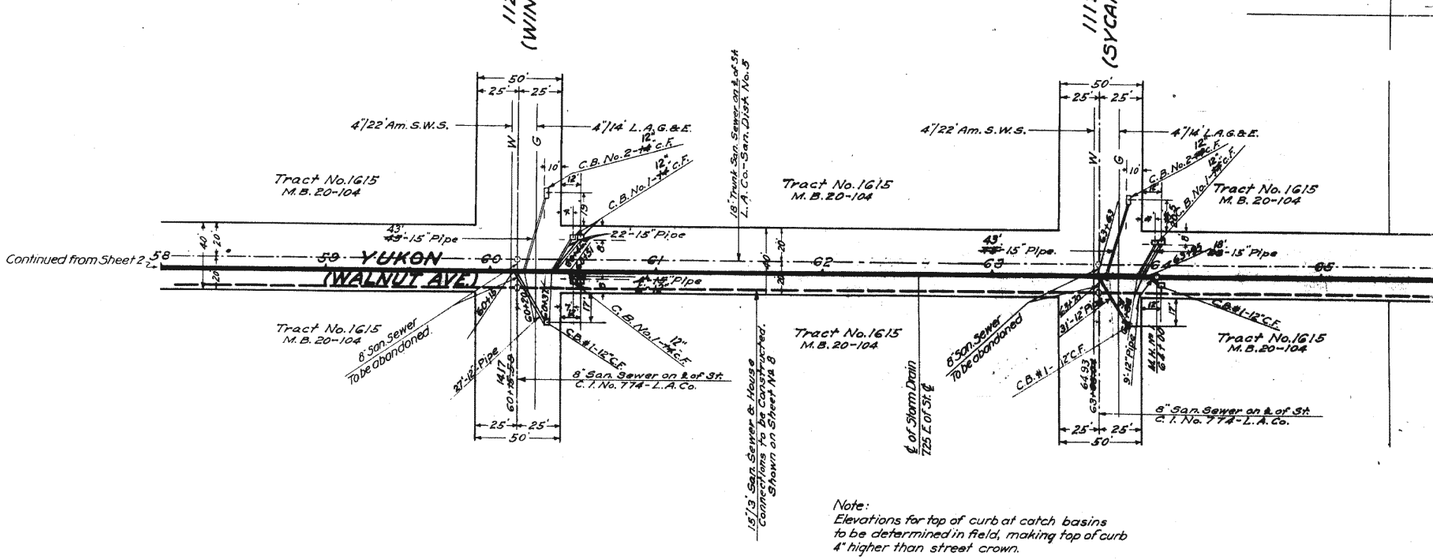


In Yukon Ave.
In 108th St.
111th ST.
110th ST.
109th ST.
6'-6" X 6'-3" R.C. BOX
S=.0014
S=.0021
74+00 End Sec. G
74+00 Begin Sec. H
SECTION G
111th ST. (CENTER AVE.)
110th ST. (GARFIELD AVE.)
109th ST. (McKINLEY AVE.)
Tract No. 1615
M.B. 20-104
Tract No. 1631
M.B. 21-86,87
4"/22" Am.S.W.S.
3"/14" L.A.G.&E.
8" San. Sewer on ℄ of St.
C.I. No. 774-L.A. Co.
8" San. Sewer To be abandoned
18" Trunk San. Sewer on ℄ of St. L.A. Co.-San. Dist. No. 5
108th
(LINCOLN AVE.)
Note:
Elevations for top of curb at catch basins to be determined in field, making top of curb 4" higher than crown of street.
LINE
YUKON
AVE
F4









BRANCH

YUKON AVENUE

(WILLIAMS ST

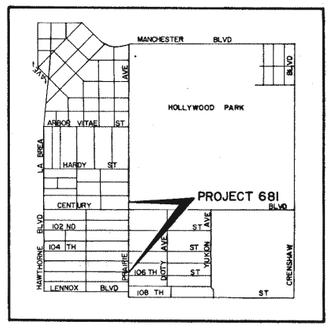
D C

C D

F5

LEGEND & ABBREVIATIONS

PROPERTY LINE	
CURB	
GUTTER	
SIDE INLET CATCH BASIN	
EXISTING DRAINAGE STRUCTURES	
GRATING TYPE CATCH BASIN	
DRIVEWAY	
LIMIT OF CONCRETE SURFACE	
WALK	
TRAFFIC SIGNAL	
DEAD MAN	
POWER, TELEPHONE OR GUY POLE	
FIRE HYDRANT	
ELECTROLIER	
WATER & GAS METER	
BENCH MARK	
TEST BORING	
TREE	
TREES TO BE REPLACED BY CONTRACTOR	
UNDER EXISTING UTILITY	⚠
OVER EXISTING UTILITY	⚠
TRAFFIC SIGNAL CONDUIT	T.S.C.
TRANSITION STRUCTURE	T. S.
MANHOLE	M.H.
LOCAL DEPRESSION	L.D.
REINFORCED CONCRETE PIPE	R.C.P.
TEST BORING	T.B.
JUNCTION STRUCTURE	J.S.
CATCH BASIN	C.B.
SANITARY SEWER	S.S.
TEMPORARY BENCH MARKS	T.B.M.
SOUTHERN CALIFORNIA GAS CO.	S.C.G.
L.A. DEPT. OF WATER & POWER WATER SYST.	DW&PWS
SOUTHERN CALIFORNIA WATER CO.	S.C.W.
INGLEWOOD CITY WATER DEPT.	ING. W.
SOUTHERN CALIFORNIA EDISON CO.	S.C.E.
PACIFIC TELEPHONE & TELEGRAPH CO.	P.T. &T.



VICINITY MAP

1000 0 1000 2000 3000 4000
GRAPHIC SCALE

LOS ANGELES COUNTY FLOOD CONTROL DISTRICT
STANDARD DRAWINGS

DRAWING NO.	TITLE
2-D88	LOCAL DEPRESSION NO. 2
2-D96	STANDARD DROP STEP
2-D107	CONCRETE RINGS, REDUCER AND PIPE
2-D193	JUNCTION STRUCTURE NO. 4
2-D156	MANHOLE FRAME AND COVER FOR CATCH BASINS
2-D160	CATCH BASIN NO. 1 (W=3'6")
2-D162	CATCH BASIN NO. 2 (W=7')
2-D163	CATCH BASIN NO. 3 (W=10'; 14'; 21'; 28'; ETC.)
2-D172	CATCH BASIN REINFORCEMENT
2-D173.1 TO .3	PIPE SUPPORTS ACROSS TRENCHES
2-D175	REMOVABLE PROTECTION BAR FOR CATCH BASINS
2-D177	PIPE BEDDING IN TRENCHES
2-D181	STANDARD NON-ROCKING MANHOLE FRAME AND COVER
2-D184	MANHOLE NO. 2 (PIPES, 36" OR LARGER)
2-D188	TRANSITION STRUCTURE NO. 3 (PIPE TO PIPE)
2-D213.1 & .2	"D" LOAD TABLE FOR DESIGN OF REINFORCED CONCRETE PIPE
2-D171	STANDARD A-305 REINFORCING BARS
2-D232	DETAIL OF CATCH BASIN OPENING
2-D250	REMODELING OF SANITARY SEWER HOUSE CONNECTIONS
2-D251	PROTECTION FOR MAIN LINE AND HOUSE CONNECTION SEWERS
2-D109	CATCH BASIN NO. 6
2-D224	CONNECTION TO CATCH BASIN FOR PIPES 12" THROUGH 72"
2-D227	FRAME AND GRATING FOR CATCH BASINS
2-D249.1 & .2	CATCH BASIN NO. 8
2-D264	ADJUSTABLE PROTECTION BAR STIRRUP
2-D393	CONCRETE COLLAR FOR PIPES 12" THROUGH 66"
2-D413	UNIFIED SOIL CLASSIFICATION SYSTEM
2-D399	CRITERIA FOR THE DESIGN OF SHORING FOR EXCAVATIONS
2-D400	SAMPLE SHEET FOR USE AS A GUIDE IN PREPARING CALCULATIONS FOR SHORING OF EXCAVATIONS
2-D113	MANHOLE NO. 4
2-D112	JUNCTION STRUCTURE NO. 2
2-D161	DETAIL OF ANGLE AND ANCHOR FOR CATCH BASINS.

LOS ANGELES COUNTY ROAD DEPARTMENT
STANDARD DRAWINGS

DRAWING NO.	TITLE
M57-39R	PARTIAL CONCRETE REPLACEMENT FOR CROSS GUTTERS AND SPANDRELS.
M57-45R	SPECIFICATIONS FOR REPAIRS OF CUTS IN CONCRETE PAVEMENT.

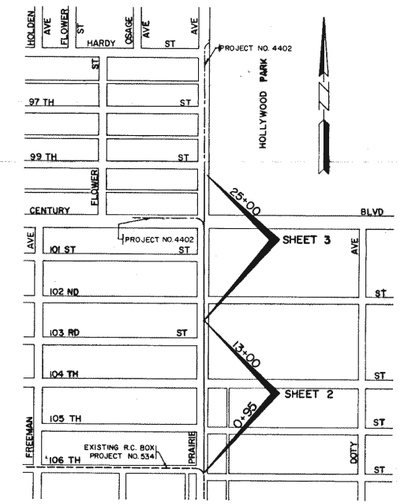
28. CONSTRUCT LOCAL DEPRESSION PER STANDARD DRAWING 2-D109 AND AS MODIFIED ON THE DRAWINGS FOR CATCH BASIN NO. 6.

■ "AS BUILT DWGS."

GENERAL NOTES

1. NUMBERS IN CIRCLES INDICATE ITEMS UNDER WHICH PAYMENT WILL BE MADE.
2. ELEVATIONS SHOWN ARE IN FEET ABOVE THE U.S.G.S. MEAN SEA LEVEL DATUM.
3. STATIONS SHOWN ON DRAWINGS ARE ALONG CENTER LINE OF CONDUIT OR ON A LINE NORMAL TO CENTER LINE OF CONDUIT.
4. STATIONS AND INVERT ELEVATIONS OF PIPE INLETS SHOWN ON THE PROFILES ARE AT THE INSIDE FACE OF THE CONDUIT, UNLESS OTHERWISE SHOWN.
5. ALL FIELD BOOK REFERENCES ARE TO CITY OF INGLEWOOD FIELD BOOKS, UNLESS OTHERWISE NOTED.
6. ALL PIPE IN OPEN TRENCH SHALL BE BEDDED ACCORDING TO STANDARD DRAWING 2-D 177, CASE III, UNLESS OTHERWISE SHOWN OR MODIFIED IN THE SPECIFICATIONS.
7. PIPE CONNECTIONS TO STORM DRAIN SHALL CONFORM TO STANDARD DRAWING 2-D 193, UNLESS OTHERWISE SHOWN.
8. TIES FOR CATCH BASINS AS SHOWN ON THE DRAWINGS ARE FROM CURB RETURN TO CENTER LINE OF CATCH BASIN, UNLESS OTHERWISE SHOWN.
9. LOCATIONS OF CATCH BASIN CONNECTOR PIPE JUNCTIONS WITH CATCH BASINS AS SHOWN ON THE DRAWINGS ARE SCHEMATIC. IT IS INTENDED THAT SUCH JUNCTIONS BE LOCATED AT THE DOWNSTREAM ENDS OF THE CATCH BASINS, UNLESS OTHERWISE SHOWN. IN ALL CASES THE EXACT LOCATIONS WILL BE DETERMINED IN THE FIELD BY THE ENGINEER TO MEET FIELD CONDITIONS.
10. MONOLITHIC CATCH BASIN CONNECTIONS SHALL BE CONSTRUCTED, WHERE APPLICABLE, PER STANDARD DRAWING 2-D 224.
11. "V_i" IS THE DEPTH OF INLET OF CATCH BASINS IN SERIES MEASURED FROM TOP OF CURB TO INVERT OF CONNECTOR PIPE.
12. ALL EXISTING SANITARY SEWERS SHOWN ON THE DRAWINGS ARE CITY OF INGLEWOOD SEWERS.
13. EXISTING UTILITIES SHALL BE MAINTAINED IN PLACE BY THE CONTRACTOR, UNLESS OTHERWISE NOTED.
14. WHERE UTILITIES ARE INDICATED ON THE DRAWINGS TO BE SUPPORTED, SAID SUPPORTS SHALL BE IN ACCORDANCE WITH STANDARD DRAWING 2-D 173.1, .2 OR .3, UNLESS OTHERWISE INDICATED.
15. LOCATIONS SHOWN ON THE PLANS FOR EXISTING SANITARY SEWER HOUSE CONNECTIONS ARE APPROXIMATE ONLY.
16. SANITARY SEWER HOUSE CONNECTION RECONSTRUCTION AND RECONNECTION SHALL BE IN ACCORDANCE WITH STANDARD DRAWING 2-D 250, UNLESS OTHERWISE SHOWN.
17. SANITARY SEWERS AND HOUSE CONNECTIONS CROSSING OVER THE STORM DRAIN TRENCH SHALL BE SUPPORTED IN ACCORDANCE WITH STANDARD DRAWINGS 2-D 173.1 TO .3 AND ENCASED PER GENERAL NOTE 1 ON STANDARD DRAWING 2-D 173.1.
18. WHEN INDICATED ON THE DRAWINGS, SANITARY SEWERS AND HOUSE CONNECTIONS SHALL BE ENCASED OR BLANKETED IN ACCORDANCE WITH STANDARD DRAWING 2-D 251.
19. ALL RESURFACING, CURBS, GUTTERS, SIDEWALKS, DRIVEWAYS AND OTHER EXISTING IMPROVEMENTS TO BE RECONSTRUCTED SHALL BE CONSTRUCTED AT THE SAME ELEVATION AND LOCATION AS THE EXISTING IMPROVEMENTS, UNLESS OTHERWISE NOTED.
20. SOIL TEST BORINGS FOR THIS PROJECT WERE MADE 8-26-65.
21. UTILITIES DESIGNATED BY THE SYMBOL * WILL BE ABANDONED IN PLACE AND THE OWNER WILL INSTALL A NEW SECTION OF THE AFFECTED UTILITY AT A LOCATION IN CLOSE PROXIMITY TO, BUT WHICH DOES NOT PHYSICALLY INTERFERE WITH, THE PROPOSED STORM DRAIN CONDUIT AND APPURTENANT STRUCTURES.
22. THE DEPTH AT THE UPSTREAM END OF CATCH BASINS 10 FEET OR MORE IN LENGTH SHALL BE CURB FACE PLUS 12 INCHES UNLESS OTHERWISE SHOWN.
23. REFER TO SHEET 4 FOR TYPICAL CATCH BASIN CONNECTOR PIPE PROFILE.
24. ALL OPENINGS RESULTING FROM THE CUTTING OR PARTIAL REMOVAL OF EXISTING PIPES, CULVERTS, OR SIMILAR STRUCTURES SHALL BE SEALED WITH 8 INCHES OF BRICK AND MORTAR OR 6 INCHES OF CONCRETE.
25. THE OPENINGS AND TOP SLABS OF ALL SIDE INLET CATCH BASINS AND CATCH BASIN NO. 6 SHALL BE MODIFIED TO MEET THE REQUIREMENTS ON STANDARD DRAWING 2-D232 EXCEPT AS NOTED.
26. WHERE REQUIRED BY STANDARD DRAWING 2-D 213.1, CONCRETE BACKFILL SHALL BE USED AROUND CONNECTOR PIPES 36 INCHES OR LESS IN DIAMETER. CONCRETE BACKFILL FOR MAIN LINE PIPE SHALL BE USED ONLY WHEN DIRECTED BY THE ENGINEER.
27. THE OPENING OF ALL SIDE INLET CATCH BASINS AND CATCH BASIN NO. 6 THAT HAVE MODIFIED LOCAL DEPRESSIONS TO BE CURB FACE PLUS 1" IN LIEU OF 9".

INDEX TO DRAWINGS



LOCATION MAP

500 0 500 1000 1500
GRAPHIC SCALE

⚠ NOTE CHANGE OF PROJECT LIMITS
Due to bond issue financing requirements, the upstream limit of Project 681, has been changed to Station 14+98. See DWG. NO. 364-681-D2.3. The downstream limit of Project 4402 Unit 1, Line C, has been extended to meet the new upstream limit of Project 681, see DWG. NO. 364-4402-D2.2

1964 STORM DRAIN BOND ISSUE

REVISIONS			
MARK	DATE	DESCRIPTION
⚠	4-24-67	Note Change Of Project Limits

DRAWN BY: INGLEWOOD
CHECKED BY: INGLEWOOD
DESIGNED BY: INGLEWOOD
SUBMITTED BY: C. W. H.

PD033736

CITY OF INGLEWOOD
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION

SUBMITTED BY:
R. K. Lee
ASSISTANT CITY ENGINEER R.C.E. 13078

APPROVED BY:
Willis Harman 11-15-65
CITY ENGINEER R.C.E. 11237 DATE

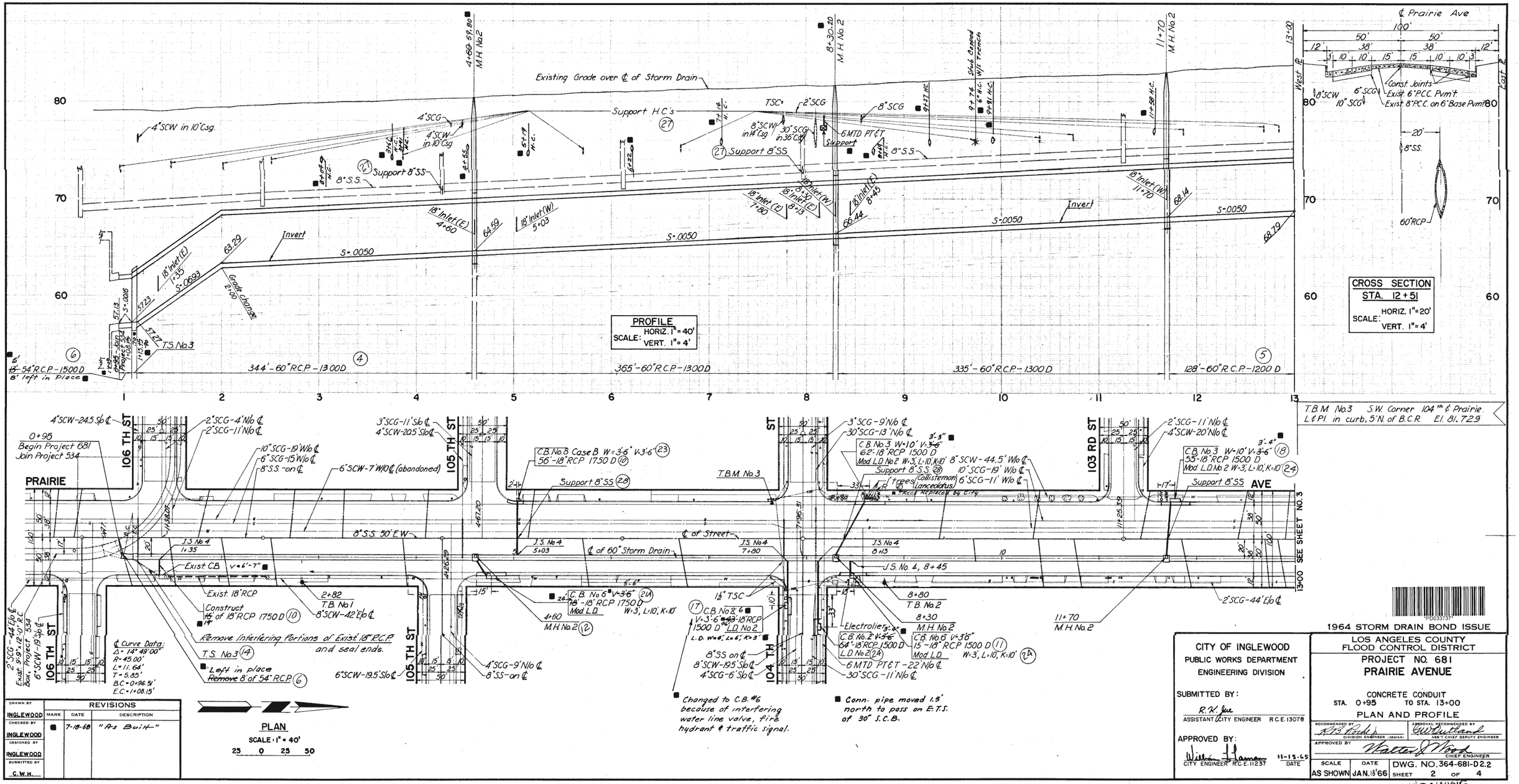
LOS ANGELES COUNTY
FLOOD CONTROL DISTRICT
PROJECT NO. 681
PRAIRIE AVENUE

LOCATION MAP, GENERAL NOTES, INDEX TO DRAWINGS, STANDARD DRAWINGS, LEGEND AND ABBREVIATIONS.

RECOMMENDED BY: R. P. Beebe 11-16-66, DIVISION ENGINEER (DESIGN)
APPROVAL RECOMMENDED BY: Earl Whitland, ASST. CHIEF DEPUTY ENGINEER
APPROVED BY: Walter J. Wood 11/21/66, CHIEF ENGINEER

SCALE	DATE	DWG. NO. 364-681-D2.1
AS SHOWN	JAN. '66	SHEET 1 OF 4

"AS BUILT" DRAWING



DRAWN BY	REVISIONS		
INGLEWOOD	MARK	DATE	DESCRIPTION
CHECKED BY	■	7-18-66	"As Built"
INGLEWOOD			
DESIGNED BY			
INGLEWOOD			
SUBMITTED BY			
C.W.H.			

1964 STORM DRAIN BOND ISSUE

CITY OF INGLEWOOD
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION

SUBMITTED BY:
R. K. Lee
ASSISTANT CITY ENGINEER R.C.E. 13078

APPROVED BY:
William Thomas
CITY ENGINEER R.C.E. 11237
11-15-65 DATE

LOS ANGELES COUNTY
FLOOD CONTROL DISTRICT

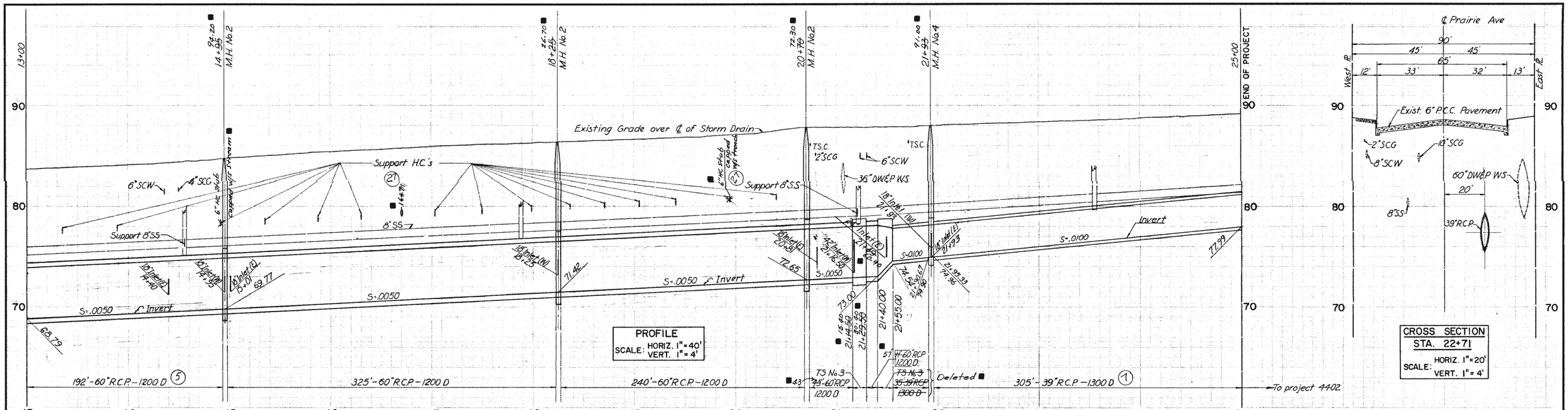
PROJECT NO. 681
PRAIRIE AVENUE

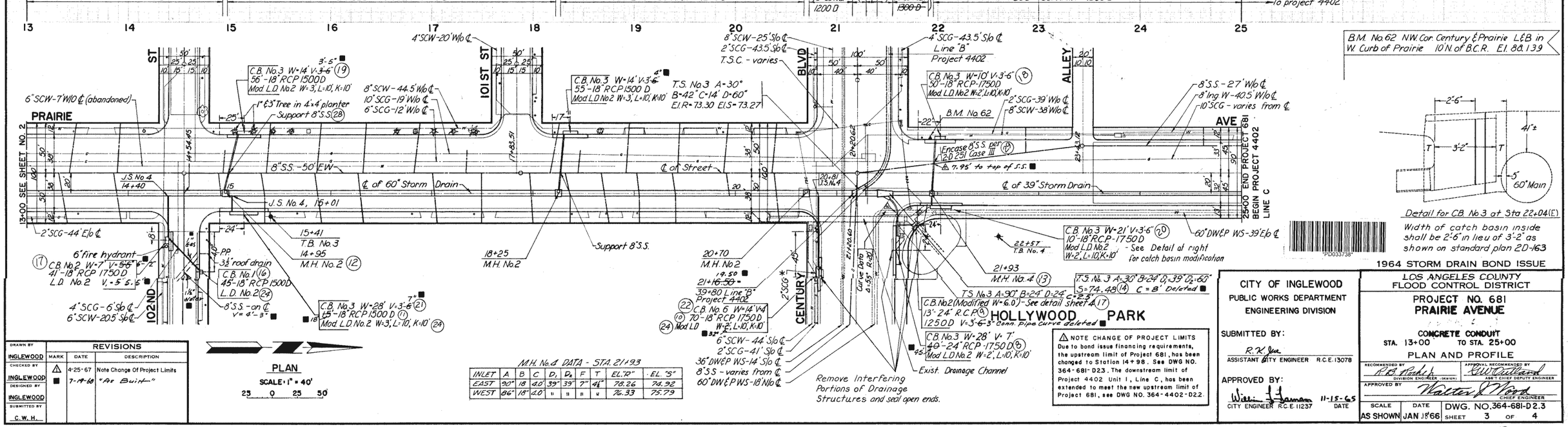
CONCRETE CONDUIT
STA. 0+95 TO STA. 13+00
PLAN AND PROFILE

RECOMMENDED BY: DIVISION ENGINEER (DESIGN)
APPROVAL RECOMMENDED BY: ASST. CHIEF DEPUTY ENGINEER
APPROVED BY: CHIEF ENGINEER

SCALE	DATE	DWG. NO. 364-681-D2.2
AS SHOWN	JAN. 18'66	SHEET 2 OF 4

"AS BUILT" DRAWING





M.H. No. 4 DATA - STA. 21+93

	A	B	C	D_1	D_2	F	T	EL."A"	EL."S"
INLET	90°	18	4.0	39"	39"	7"	4½"	78.26	74.92
EAST	86°	18	4.0	"	"	"	"	76.33	75.79

B.M. No. 62 NW. Cor. Century & Prairie L&B in W. Curb of Prairie 10'N. of B.C.R. El. 88.139

PD033738

1964 STORM DRAIN BOND ISSUE

DRAWN BY	REVISIONS		
INGLEWOOD	MARK	DATE	DESCRIPTION
CHECKED BY	⚠	4-25-67	Note Change Of Project Limits
INGLEWOOD	■	7-19-66	"As Built"
DESIGNED BY			
INGLEWOOD			
SUBMITTED BY			
C.W.H.			

⚠ NOTE CHANGE OF PROJECT LIMITS
Due to bond issue financing requirements, the upstream limit of Project 681, has been changed to Station 14+98. See DWG NO. 364-681-D23. The downstream limit of Project 4402 Unit 1, Line C, has been extended to meet the new upstream limit of Project 681, see DWG NO. 364-4402-D22.

CITY OF INGLEWOOD
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION

SUBMITTED BY:
R.K. Lee
ASSISTANT CITY ENGINEER R.C.E. 13078

APPROVED BY:
Willis H. Hannan 11-15-65
CITY ENGINEER R.C.E. 11237 DATE

LOS ANGELES COUNTY FLOOD CONTROL DISTRICT

PROJECT NO. 681
PRAIRIE AVENUE

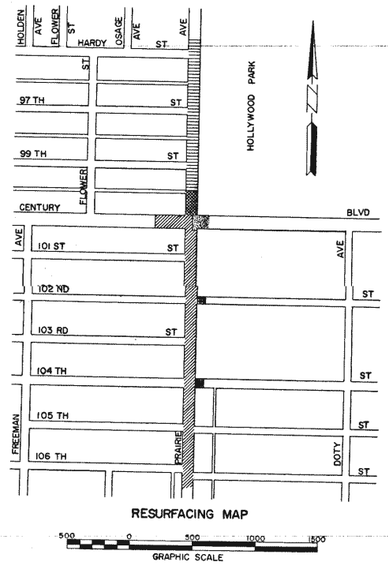
CONCRETE CONDUIT
STA. 13+00 TO STA. 25+00

PLAN AND PROFILE

RECOMMENDED BY: K.S. Pickett, DIVISION ENGINEER (DESIGN)
APPROVAL RECOMMENDED BY: C.W. Williams, ASST'T CHIEF DEPUTY ENGINEER
APPROVED BY: Walter E. Ward, CHIEF ENGINEER

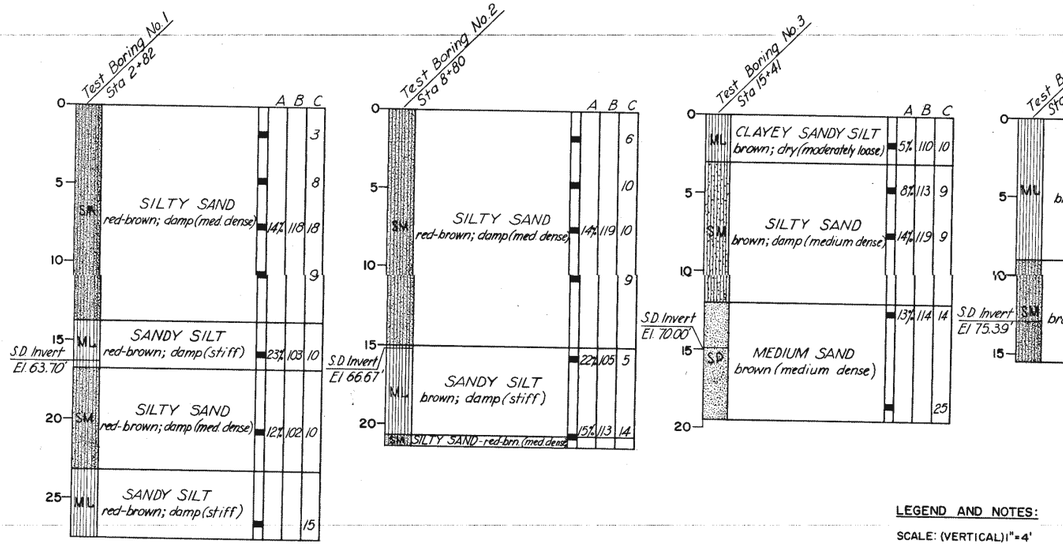
SCALE	DATE	DWG. NO. 364-681-D2.3
AS SHOWN	JAN 18'66	SHEET 3 OF 4

"AS BUILT" DRAWING



RESURFACING MAP

500 0 500 1000 1500
GRAPHIC SCALE



EXISTING SURFACE

- 8" P.C.C. PAVEMENT ON 6" SELECTED BASE MATERIAL
- 2½" A. C. SURFACE ON 6" PORTLAND CEMENT CONC.
- 3" A. C. SURFACE ON 12" SELECTED BASE MATERIAL
- 6" PORTLAND CEMENT CONCRETE

PROPOSED RESURFACING (1)

- 8" P.C.C. PAVEMENT ON 6" SELECTED BASE MATERIAL
- 2½" A. C. SURFACE ON 6" PORTLAND CEMENT CONC.
- 4" A. C. SURFACE ON 12" SELECTED BASE MATERIAL
- 6" PORTLAND CEMENT CONCRETE

LEGEND AND NOTES:

SCALE: (VERTICAL) 1"=4'

A MOISTURE CONTENT IN PERCENTAGE

B DRY DENSITY IN LBS PER CUBIC FOOT

C STANDARD PENETRATION; NO. OF BLOWS PER FOOT

■ DEPTH AT WHICH UNDISTURBED SAMPLE WAS TAKEN

ALL BORINGS WERE COMPLETED 8-26-65.

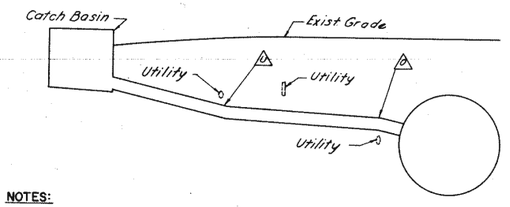
NO GROUND WATER OR CAVING WAS ENCOUNTERED IN ANY BORING.

INVERT OF STORM DRAIN SHOWN ON THIS SHEET SUPERSEDES THAT SHOWN IN THE SOIL REPORT.

THE SOIL CLASSIFICATIONS SHOWN ARE IN ACCORDANCE WITH THE UNIFIED SOIL CLASSIFICATION SYSTEM.

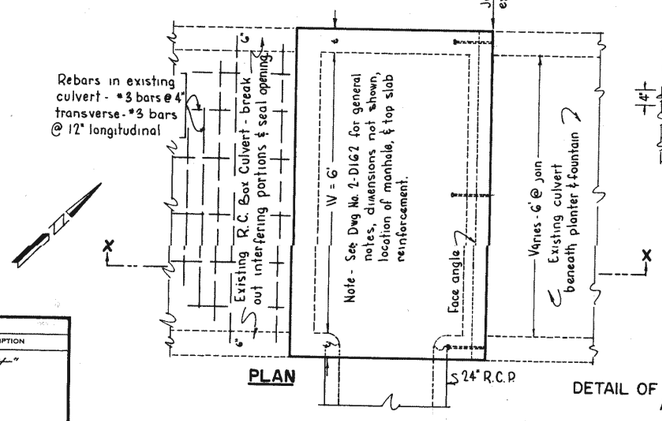
TYPICAL CONNECTOR PIPE PROFILE

NO SCALE

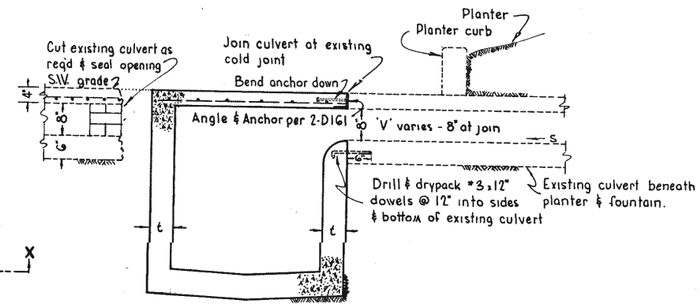


NOTES:

1. The change in grade of the connector pipe may occur either over or under an existing utility. The particular utility at which the change occurs is noted on the project drawings. At locations where utility crossings are marked Ⓐ the connector pipe grade will break over the utility. At locations where utility crossings are marked Ⓑ the connector pipe grade will break under the utility.
2. On those connector pipes where change in grade is not indicated, it is assumed that the connector pipe can be laid on a straight grade from the catch basin to the storm drain without interference with utilities.
3. Where connector pipe has a change of grade exceeding .10 ft or differs in diameter from that of existing pipe, use concrete collar per std 2-D393.
4. The contractor shall make exploratory excavations to determine the exact location and depth of utilities, which are marked "Ⓐ" or "Ⓑ". After the exact location of a utility has been determined, the grade and alignment of the connector pipe will be staked so as to clear the utility.



PLAN



SECTION X-X

DETAIL OF CATCH BASIN NO. 2 (MODIFIED) AT STA. 21+78 (EAST)
Scale 3/4" = 1'

DRAWN BY	REVISIONS		
INGLEWOOD	MARK	DATE	DESCRIPTION
CHECKED BY INGLEWOOD	■	7-19-68	"As Built"
DESIGNED BY INGLEWOOD			
SUBMITTED BY C. W. H.			

1964 STORM DRAIN BOND ISSUE

CITY OF INGLEWOOD
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION

SUBMITTED BY:
R. W. Lee
ASSISTANT CITY ENGINEER R.C.E. 13078

APPROVED BY:
W. H. Hamman 11-15-68
CITY ENGINEER R.C.E. 11237 DATE

LOS ANGELES COUNTY FLOOD CONTROL DISTRICT

PROJECT NO. 681
PRAIRIE AVENUE

LOG OF BORINGS, RESURFACING PLAN AND MISCELLANEOUS DETAILS

RECOMMENDED BY: A. B. Rodine, DIVISION ENGINEER - DESIGN
APPROVAL RECOMMENDED BY: R. W. Cutland, ASS'T CHIEF DEPUTY ENGINEER
APPROVED BY: Walter J. Wood, CHIEF ENGINEER

SCALE	DATE	DWG. NO. 364-681-D2.4
AS SHOWN	JAN. 12 '66	SHEET 4 OF 4

"AS BUILT" DRAWING