



GAIL FARBER, Director

COUNTY OF LOS ANGELES

DEPARTMENT OF PUBLIC WORKS

"To Enrich Lives Through Effective and Caring Service"

900 SOUTH FREMONT AVENUE
ALHAMBRA, CALIFORNIA 91803-1331
Telephone: (626) 458-5100
<http://dpw.lacounty.gov>

ADDRESS ALL CORRESPONDENCE TO:
P.O. BOX 1460
ALHAMBRA, CALIFORNIA 91802-1460

January 21, 2009

IN REPLY PLEASE

REFER TO FILE: SM-1

Mr Darrell J George
City Manager
City of Duarte
1600 Huntington Drive
Duarte, CA 91010-2592

Attention Ms. Marla Akana

Dear Mr George:

CONSOLIDATED SEWER MAINTENANCE DISTRICT CONDITION ASSESSMENT PROGRAM REPORT PROJECT Y0TV0506D

This letter is to inform you that as part of the Sewer Condition Assessment Program, the County of Los Angeles Department of Public Works Consolidated Sewer Maintenance District has completed the closed-circuit television (CCTV) inspection of 27,779 feet or 11.7 percent of the City of Duarte's sewer system.

The enclosed report outlines the structural and maintenance ratings of your system based on the Pipeline Assessment and Certification Program's rating methodology. Included in the report are the following:

- Condition Assessment Report
- Project Overview Map (Enclosure 1)
- Quick Maintenance Rating Report Priority List and Quick Maintenance Rating Map (Enclosure 2)
- Quick Structural Rating Report Priority List and Quick Structural Rating Map (Enclosure 3)
- Infrastructure Inspection Reports for Grades 4 and 5 (Enclosure 4)
- CCTV Sewer Inspection Project Schedule (Enclosure 5)

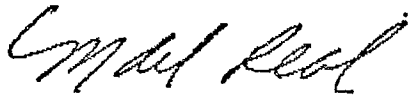
Mr Darrell J George
January 21, 2009
Page 2

The Condition Assessment Report will provide you with details regarding the maintenance and structural condition of your City's sewer mainlines. This information can be included in your agency's Sewer System Management Plan as a reference in Chapter 8.0, System Evaluation and Capacity Assurance Plan. The segments with critical maintenance issues have been cleaned and, in some instances, have been incorporated into our routine cleaning schedule for continued monitoring. In addition, the segments with severe structural defects have either been repaired or will be scheduled for repair as part of the ongoing Accumulative Capital Outlay Project.

If you have any questions regarding this report or the Condition Assessment Program, please contact Mr Robert Swartz at (626) 300-3367, Monday through Friday, 8 a.m. to 4 p.m., or at rswartz@dpw.lacounty.gov.

Very truly yours,

GAIL FARBER
Director of Public Works



MANUEL DEL REAL
Assistant Deputy Director
Sewer Maintenance Division

FV:kk
1607

Enc.

bc: Programs Development (Ariki)

bc: MdR, KL, RS, FV, File (Project Y0TV0506D), SPINDLE

**CONDITION ASSESSMENT REPORT
COUNTY OF LOS ANGELES DEPARTMENT OF PUBLIC WORKS
CONSOLIDATED SEWER MAINTENANCE DISTRICT**

PROJECT NAME:	Y0TV0506D	PROJECT MGR:	Kari Eskridge
PROJECT DATE:	4/17/06-8/14/06	CONTACT NO:	(626) 300-3390
SUP. DISTRICT(s):	5	MAP PAGE(S):	2166, 2212
Report By:	Colin McCarter	Report Date:	01/09/09

INTRODUCTION

As part of the Sewer Condition Assessment Program, the County of Los Angeles Department of Public Works Consolidated Sewer Maintenance District has completed the closed-circuit television (CCTV) inspection of 27,998 feet or 11.7 percent of the City of Duarte’s sewer system.

The Sewer Condition Assessment Program utilizes the Pipeline Assessment and Certification Program (PACP) Quick Rating methodology to rank the maintenance and structural condition of your system based on industry standards.

PROJECT AREA AND DESCRIPTION

Project Y0TV0506D included sewer lines located in both the Unincorporated County of Los Angeles area and in the Cities of Glendora, Bradbury, Duarte, La Canada Flintridge, and San Dimas. Enclosed for your reference is an overview map of the project area within your City (Enclosure 1).

DEFECT GRADE DESCRIPTION

The Quick Rating indicates the number of occurrences for the highest severity grade for each pipe segment for either maintenance or structural defects. A grade of 1 indicates that a pipe segment is in excellent condition with minor defects, while a grade of 5 indicates that a pipe segment may require immediate attention. A detailed breakdown of the five possible defect grades is as follows:

Grade	Description	Estimate time to Failure
1:	EXCELLENT: Minor Defects.	Unlikely in the foreseeable future
2:	GOOD: Defects that have not begun to deteriorate.	20 years or more
3:	FAIR: Moderate defects that will continue to deteriorate.	10 to 20 years
4:	POOR: Sever defects that will become grade 5 defects within the foreseeable future.	5 to 10 years
5:	IMMEDIATE ATTENTION: Defects requiring immediate attention.	Has failed or will likely fail within the next 5 years

MAINTENANCE REPORT

Our inspection revealed that approximately 90.5 percent of the system televised was free of blockages or restrictions that would impede sewer flows. However, the remaining 9.5 percent of the inspected pipe segments within the City of Duarte area had a PACP maintenance grade of 4 as indicated in the Quick Maintenance Rating Table shown below. These segments have been incorporated into our routine cleaning schedule with corrective action taken as noted on the Quick Maintenance Rating Report Priority List (Enclosure 2). Also included is a color-coded map showing the quick maintenance rating for each pipe segment.

QUICK MAINTENANCE RATING TABLE

DEFECT GRADE	PIPE LENGTH (FT)	PERCENT TOTAL INSPECTED PIPE LENGTH	NO. SEGMENTS
1: Excellent	528	1.9	3
2: Good	20,892	75.2	101
3: Fair	3,720	13.4	12
4: Poor	2,639	9.5	10
5: Immediate Attention	0	0	0
TOTAL	27,779	100.0	126

STRUCTURAL REPORT

Our inspection revealed that approximately 95.3 percent of the inspected pipe segments within the City of Duarte were free of severe structural defects. However, the remaining 4.7 percent of the inspected pipe segments had a PACP structural grade of 4 or 5 as indicated in the Quick Structural Rating Table shown below. These segments have been placed on a priority list based on the severity and the need for action. For Items 1 through 5 in the Quick Structural Rating Report Priority List (Enclosure 3) which require a corrective action, the proposed corrective method will be scheduled in the next 24 months as part of the ongoing Accumulative Capital Outlay Project. A color-coded map showing the Quick Structural Rating for each pipe segment is located in Enclosure 3. Copies of the actual inspection reports for these five segments are included in Enclosure 4.

QUICK STRUCTURAL RATING TABLE

DEFECT GRADE	PIPE LENGTH (FT)	PERCENT TOTAL INSPECTED PIPE LENGTH	NO. SEGMENTS
1: Excellent	8,791	31.6	53
2: Good	2,596	9.4	10
3: Fair	15,093	54.3	58
4: Poor	691	2.5	3
5: Immediate Attention	608	2.2	2
TOTAL	27,779	100.0	126

FUTURE PROJECTS

The Sewer Condition Assessment Program will be performing future closed-circuit television (CCTV) inspection of the remaining sewer lines within the City of Duarte. For your reference, the CCTV Sewer Inspection project schedule for the City of Duarte is listed in Enclosure 5.

ENCLOSURE 1:

Project Overview Map

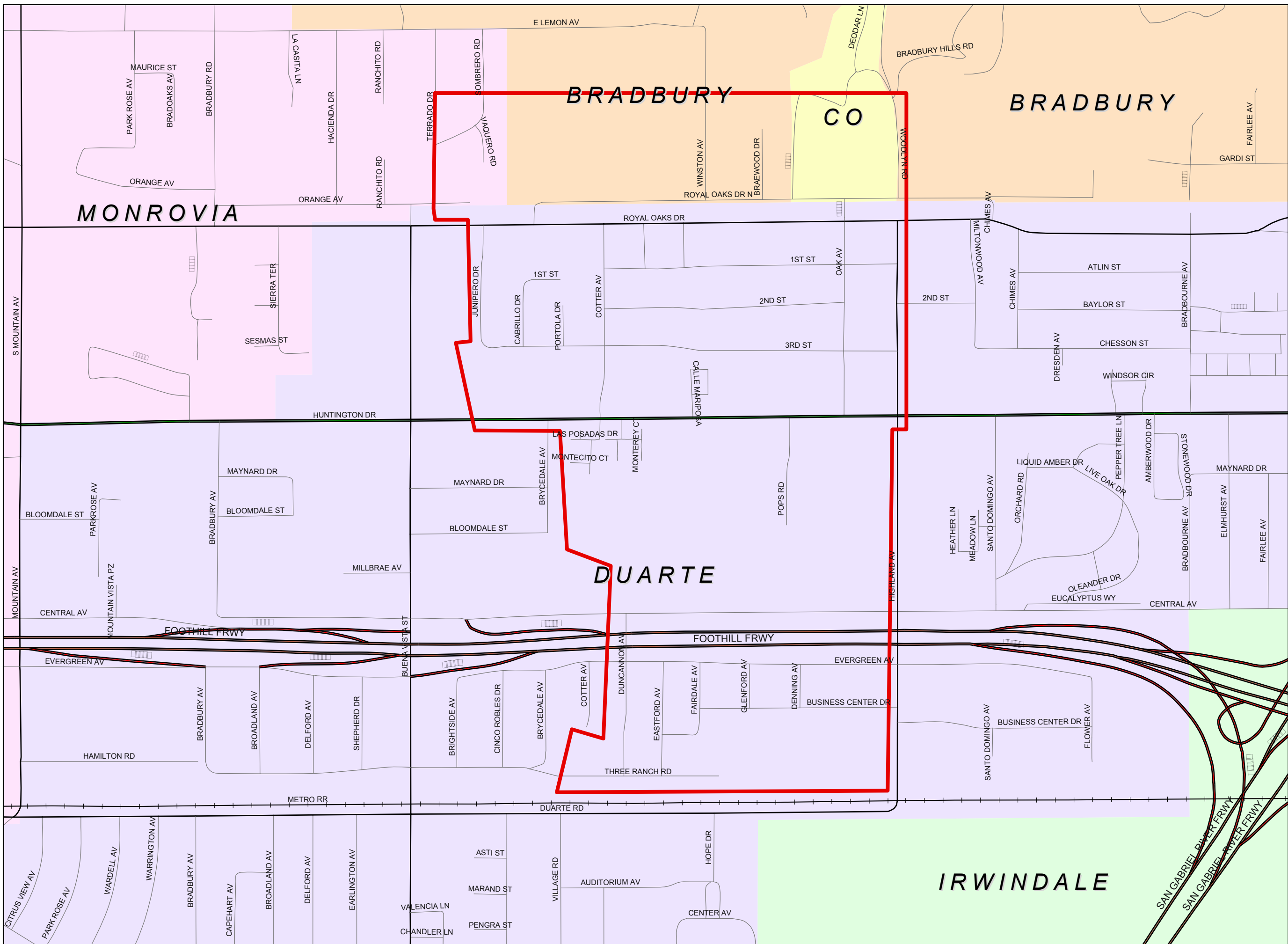
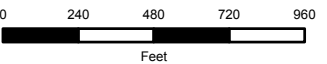
ENCLOSURE 1

CCTV PROJECT

YOTV0506D

Supervisorial District 5
Bradbury, Duarte, Glendora,
La Canada Flintridge,
San Dimas, Unincorporated County

PROJECT OVERVIEW



Legend

- all other values
- SMD Manholes**
 - Other
- MH Type**
 - Standard
 - DROP
 - Shallow
 - Trap
 - Siphon
- SMD Pump Satations
- SMD Treatment Plants
- Maintained by Others:**
 - Trunk Sewerlines
 - Non SMD Sanitary Sewers
 - Trunk Mh
 - DPW SMD.nosmd mh
 - Parcel Boundary
 - SMD Operations Maps
 - YOTV0506D

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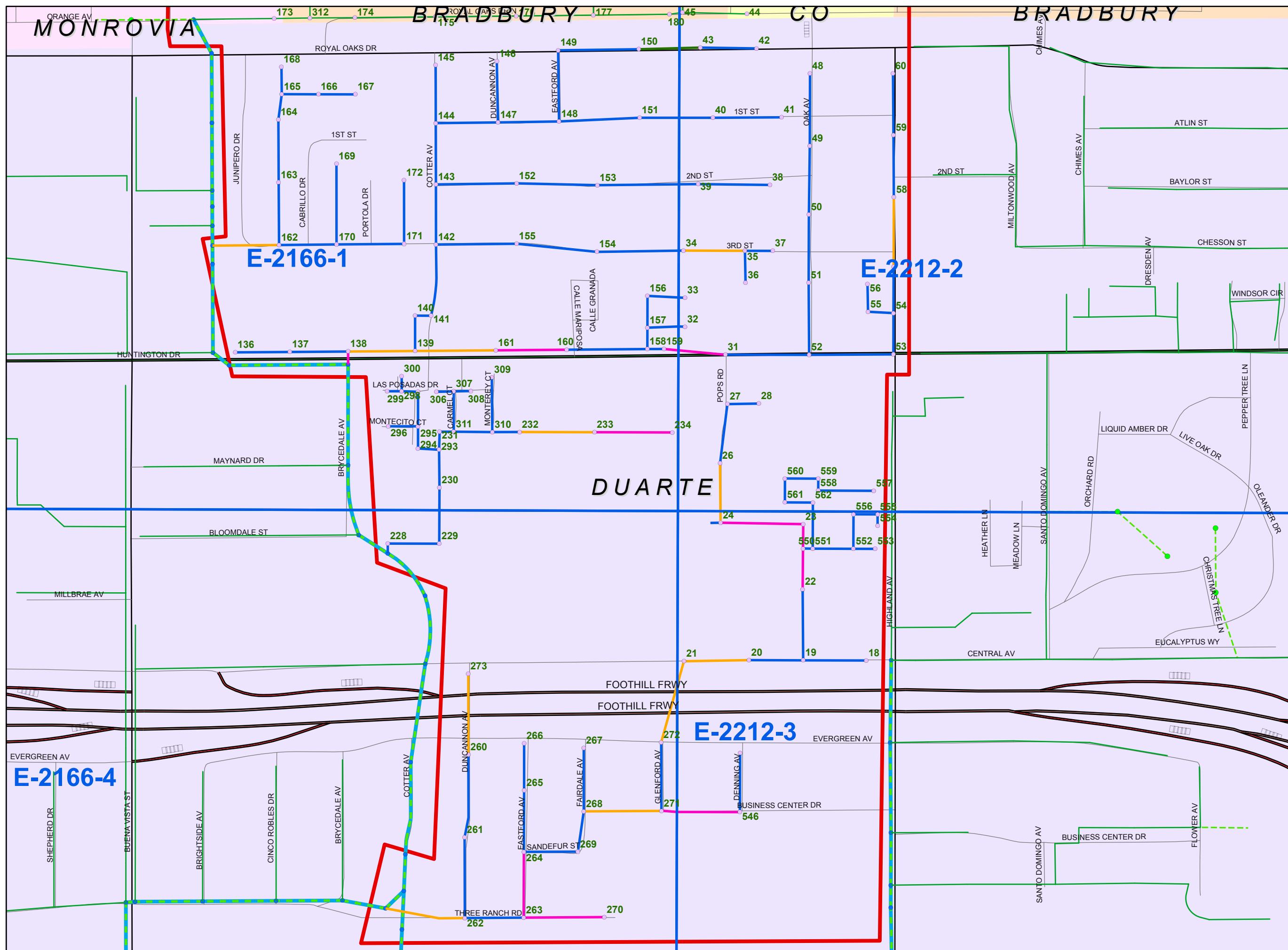
December 11, 2008

ENCLOSURE 2:

- Quick Maintenance Rating Report
Priority List
- Quick Maintenance Rating Map

ENCLOSURE 2
 QUICK MAINTENANCE RATING REPORT PRIORITY LIST
 CITY OF DUARTE (Y0TV0506D)
 as of 8.14.06

Item No.	QMR	Start MH	End MH	Street	Observation	Corrective Action Taken
1	4231	2166-0263	2166-0270	THREE RANCH RD	Roots	Hydrojet (Last Serviced: 7/08/08)
2	4231	2166-0138	2166-TRNK	HUNTINGTON DR	Sag in Pipe	Rodder (Last Serviced: 7/25/08)
3	422D	2212-0023	2212-0024	POPS RD R/W	Roots	Rodder (Last Serviced: 7/29/08)
4	4223	2212-0031	2166-0159	HUNTINGTON DR	Roots	Hydrojet (Last Serviced: 1/30/08)
5	4222	2212-0550	2212-0022	POPS RD R/W	Camera underwater	Rodder (Last Serviced: 7/29/08)
6	4221	2212-0546	2166-0271	BUSINESS CENTER DR	Root ball from lateral	Laterals are the responsibility of the property owner.
7	4133	2166-0160	2166-0161	HUNTINGTON DR	Roots	Rodder (Last Serviced: 7/25/08)
8	4121	2212-0023	2212-0550	POPS RD R/W	Roots	Rodder (Last Serviced: 7/08/08)
9	4121	2166-0233	2166-0234	DUARTE PARK R/W	Roots	Rodder (Last Serviced: 7/29/08)
10	4121	2166-0264	2166-0263	EASTFORD AV	Root ball from lateral	Laterals are the responsibility of the property owner.



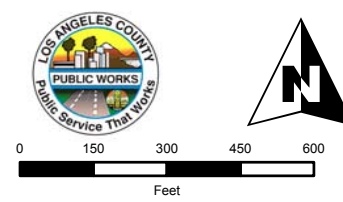
ENCLOSURE 2

CCTV PROJECT

YOTVO506D

Supervisorial District 5
 Bradbury, Duarte, Glendora,
 La Canada Flintridge,
 San Dimas, Unincorporated County

QUICK MAINTENANCE RATING (QMR)



Legend

SMD Sanitary Sewers

- all other values
- 1- EXCELLENT
- 2- GOOD
- 3- FAIR
- 4- POOR

SMD Manholes

- Other
- Standard
- ▲ DROP
- Shallow
- ◆ Trap
- ⊗ Siphon
- SMD Pump Stations

SMD Treatment Plants

Maintained by Others:

- Trunk Sewerlines
- Non SMD Sanitary Sewers
- Trunk Mh
- DPW: SMD.nosmd.mh
- Parcel Boundary
- SMD Operations Maps
- YOTVO506D

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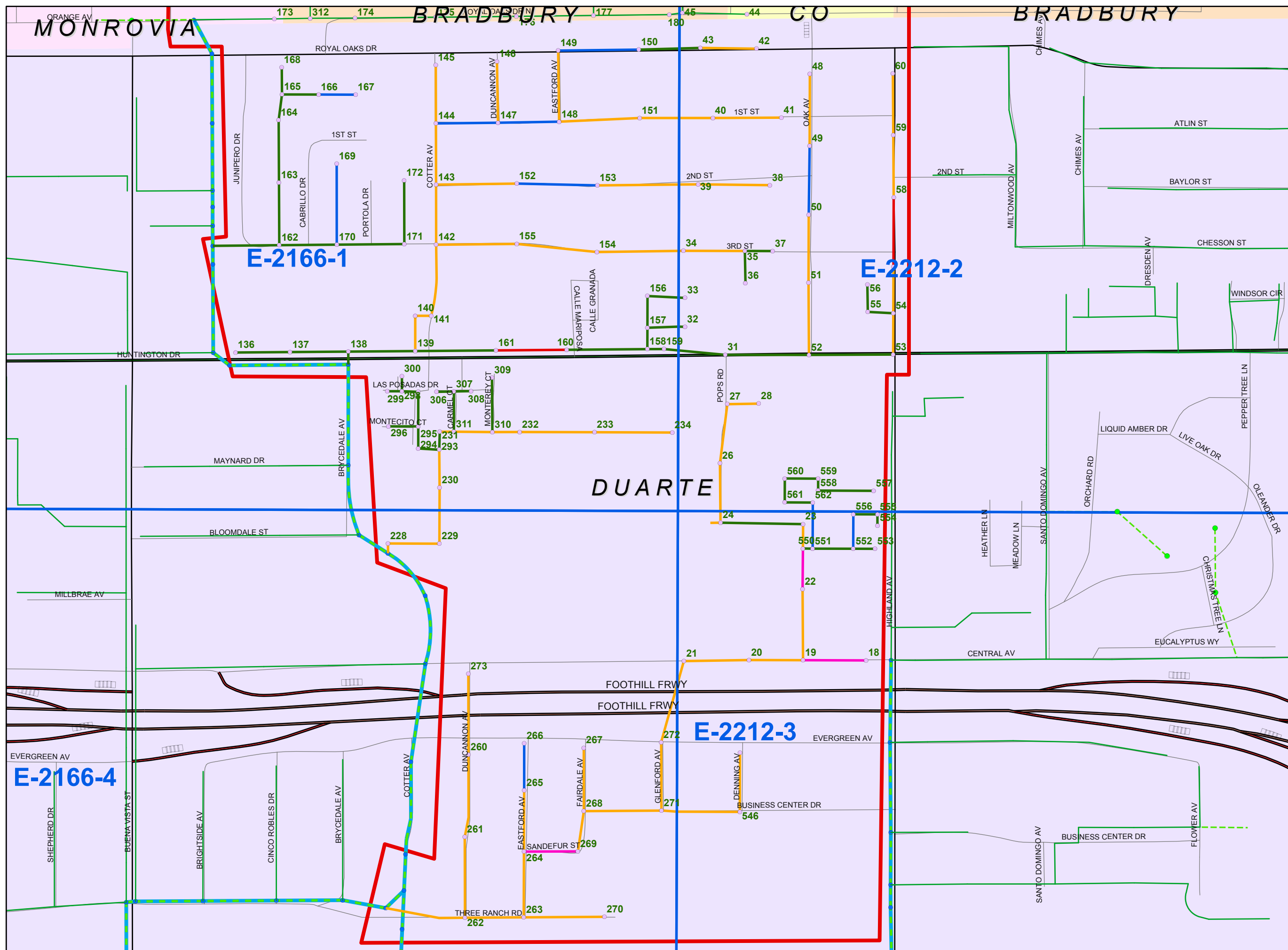
December 11, 2008

ENCLOSURE 3:

- Quick Structural Rating Report
Priority List
- Quick Structural Rating Map

ENCLOSURE 3
 QUICK STRUCTURAL RATING REPORT PRIORITY LIST
 CITY OF DUARTE (Y0TV0506D)
 as of 8/14/06

Item No.	QSR	Start MH	End MH	Street	Observation: Location	Proposed Corrective Method	Length of Repair (FT)
1	5135	2212-0058	2212-0057	HIGHLAND AV	Broken at joint with gasket visible: 180'	Structural integrity in tact. No action needed.	-
2	5100	2166-0160	2166-0161	HUNTINGTON DR	Broken with soil visible: 101'	Structural integrity in tact. No action needed.	-
3	4137	2212-0550	2212-0022	POPS RD R/W	Joint offset: 128'; multiple fractures and cracks	Point repair at 128'; Lining: MH to MH after point repair	183
4	4133	2166-0269	2166-0264	SANDEFUR ST	Hole: 223'	Structural integrity in tact. No action needed.	-
5	4122	2212-0019	2212-0018	CENTRAL AV	Broken: 38'	Lining: MH to MH	274



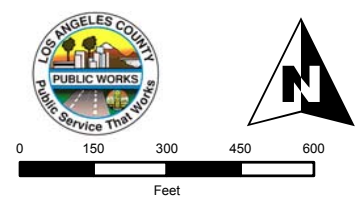
ENCLOSURE 3

CCTV PROJECT

YOTVO506D

Supervisorial District 5
 Bradbury, Duarte, Glendora,
 La Canada Flintridge,
 San Dimas, Unincorporated County

QUICK STRUCTURAL RATING (QSR)



Legend

- SMD Sanitary Sewers**
 - all other values
 - 1- EXCELLENT
 - 2- GOOD
 - 3- FAIR
 - 4- POOR
 - 5- IMMEDIATE ATTENTION
- SMD Manholes**
 - Other
- MH Type**
 - Standard
 - DROP
 - Shallow
 - Trap
 - Siphon
 - SMD Pump Stations
 - SMD Treatment Plants
- Maintained by Others:**
 - Trunk Sewerlines
 - Non SMD Sanitary Sewers
 - Trunk Mh
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 - Parcel Boundary
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December 11, 2008

ENCLOSURE 4:

Infrastructure Inspection Reports
for Grades 4 and 5



National Plant Services, INC.
 1461 Harbor Avenue
 Long Beach, CA 90813-2741
 Tel: (800) 445-3614, Fax: (562) 495-1528

Inspection report

Date: 20060821	P.O.#: Y0TV0506D	Weather: 1 Dry	Surveyed By: NPS T Glock	section number: 370	PSR: 106861
Total Pipe Length: 301	Survey Customer: LACDPW	System Owner: DUA	Clean Date:	Pre-Cleaned: J Jetting	Map Grid #: 2212

Street: HIGHLAND AV	Flow Control: N Not Controlled	Start MH: 2212-0058
City: DUA	Year Renewed:	End MH: 2212-0057
Location Code: C Light Highway	Tape/Media #: 011	pipe length: 349.91 ft

Reason for inspection: F Routine Assessment	Dia/Height: C Circular 8/8
Use of Sewer: SS Sanitary	Material: VCP Vitrified Clay Pipe Pipe Length: 5.0
Drain. Area:	Lining Method:
	Category:

Remark.: **Cracks,broken pipe**

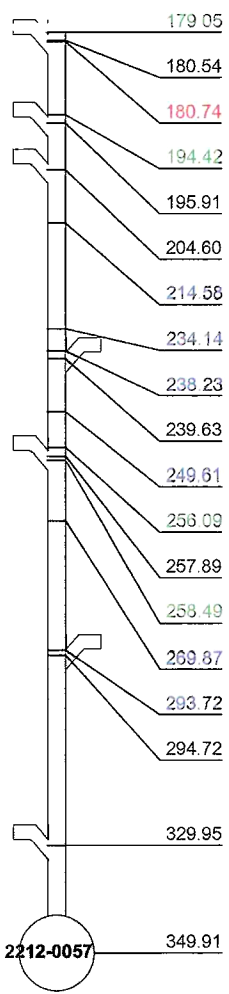
1:429	position	observation	MPEG	photo	grade
	0.00	Manhole, Remark: Start of Segment	00:00:48		
	2.10	Water Level, 5 % of cross sectional area	00:01:07		M 2
	2.10	Water Mark, 10 % of cross sectional area	00:02:06		M 2
	11.78	Crack Longitudinal, at 10 o'clock, within 8 inch: YES	00:02:51		S 2
	15.37	Crack Longitudinal, at 01 o'clock, within 8 inch: YES	00:04:28		S 2
	35.23	Crack Spiral, from 08 to 11 o'clock, within 8 inch: YES	00:05:25		S 2
	39.62	Crack Multiple, from 02 to 09 o'clock, within 8 inch: YES	00:05:47	1083a	S 3
	47.71	Crack Multiple, from 02 to 06 o'clock, within 8 inch: YES	00:06:27		S 3
	49.10	Tap Factory Made Active, at 02 o'clock, 6", within 8 inch: YES	00:06:46		
	55.19	Crack Spiral, from 10 to 02 o'clock, within 8 inch: YES	00:07:12	1086a	S 2
	63.08	Crack Longitudinal, at 12 o'clock, within 8 inch: YES	00:07:43		S 2
	64.47	Tap Factory Made Active, at 10 o'clock, 6", within 8 inch: YES	00:08:05		
	66.47	Crack Longitudinal, at 02 o'clock, within 8 inch: YES	00:08:22		S 2
	82.74	Crack Multiple, from 10 to 04 o'clock, within 8 inch: YES	00:09:16	1090a	S 3
	82.74	Obstacles Rocks, 20 % of cross sectional area, from 04 to 08 o'clock	00:09:23	1091a	M 3
	90.92	Crack Multiple, from 02 to 04 o'clock, within 8 inch: YES	00:10:50	1092a	S 3
	98.81	Crack Multiple, from 10 to 02 o'clock, within 8 inch: YES	00:10:52		S 3
	117.87	Crack Longitudinal, at 10 o'clock, within 8 inch: YES	00:12:06		S 2
	127.45	Tap Factory Made Capped, at 02 o'clock, 6", within 8 inch: YES	00:12:28		
	133.64	Crack Longitudinal, at 11 o'clock, within 8 inch: YES	00:13:00	1096a	S 2
	150.50	Tap Factory Made Capped, at 10 o'clock, 6", within 8 inch: YES	00:13:37		
	159.69	Crack Longitudinal, at 02 o'clock, within 8 inch: YES	00:14:02		S 2



Inspection report

Date: 20060821	P.O.#: Y0TV0506D	Weather: 1 Dry	Surveyed By: NPS T Glock	section number: 370	PSR: 106861
Total Pipe Length: 301	Survey Customer: LACDPW	System Owner: DUA	Clean Date:	Pre-Cleaned: J Jetting	Map Grid #: 2212

1:429	position	observation	MPEG	photo	grade
	<u>179.05</u>	Joint Offset Medium	00:15:00	1099a	S 1
	<u>180.54</u>	Tap Factory Made Active, at 03 o'clock, 6" within 8 inch: YES	00:15:15		
	<u>180.74</u>	Broken Soil Visible, from 07 to 09 o'clock, within 8 inch: YES	00:15:32	1101a	S 5
	<u>194.42</u>	Joint Offset Medium	00:16:18	1102a	S 1
	<u>195.91</u>	Tap Factory Made Active, at 03 o'clock, 6" within 8 inch: YES	00:16:35		
	<u>204.60</u>	Tap Factory Made Abandoned, at 02 o'clock, 6", within 8 inch: YES, Remark: No water stain	00:17:14		
	<u>214.56</u>	Crack Longitudinal, at 01 o'clock, within 8 inch: YES	00:17:47		S 2
	<u>234.14</u>	Crack Spiral, from 01 to 04 o'clock, within 8 inch: YES	00:18:26		S 2
	<u>238.23</u>	Crack Spiral, from 07 to 10 o'clock, within 8 inch: YES	00:18:45		S 2
	<u>239.63</u>	Tap Factory Made Abandoned, at 10 o'clock, 6", within 8 inch: YES, Remark: No water stain	00:18:55		
	<u>249.61</u>	Crack Spiral, from 07 to 11 o'clock, within 8 inch: YES	00:19:26		S 2
	<u>253.09</u>	Joint Offset Medium	00:19:49	1111a	S 1
	<u>257.89</u>	Tap Factory Made Active, at 03 o'clock, 6" within 8 inch: YES	00:20:07		
	<u>258.49</u>	Joint Offset Medium	00:20:52	1113a	S 1
	<u>269.67</u>	Crack Spiral, from 10 to 12 o'clock, within 8 inch: YES	00:21:24		S 2
	<u>293.72</u>	Crack Spiral, from 02 to 05 o'clock, within 8 inch: YES	00:22:14		S 2
	<u>294.72</u>	Tap Factory Made Active, at 10 o'clock, 6", within 8 inch: YES	00:22:27		
	<u>329.95</u>	Tap Factory Made Active, at 02 o'clock, 6" within 8 inch: YES	00:24:38		
	<u>349.91</u>	Manhole, Remark: End of Segment Pipe found VCP	00:24:51		



QSR	QMR	SPR	MPR	OPR	SPRI	MPRI	OPRI
5135	3122	54	7	61	2.16	2.33	2.18



Inspection report

Date: 20060822	P.O.#: Y0TV0506D	Weather: 1 Dry	Surveyed By: NPS T Glock	section number: 461	PSR: 112758
Total Pipe Length: 307	Survey Customer: LACDPW	System Owner: DUA	Clean Date:	Pre-Cleaned: J Jetting	Map Grid #: 2166

Street: HUNTINGTON DR	Flow Control: N Not Controlled	Start MH: 2166-0160
City: DUA	Year Renewed:	End MH: 2166-0161
Location Code: C Light Highway	Tape/Media #: 013	pipe length: 325.06 ft

Reason for inspection: F Routine Assessment	Dia/Height: C Circular 8/8
Use of Sewer: SS Sanitary	Material: VCP Vitrified Clay Pipe Pipe Length: 3.0
Drain. Area:	Lining Method: Category:

Remark: **Broken pipe ,Roots**

1 800	position	observation	MPEG	photo	grade
	0.00	Manhole, Remark: Start of Segment	00:00:54		
	1.40	Water Level, 15 % of cross sectional area	00:01:11		M 2
	1.40	Water Mark, 25 % of cross sectional area	00:01:14		M 2
	2.59	Roots Fine Joint, from 07 to 09 o'clock, within 8 inch: YES	00:01:26		
	9.48	Roots Fine Joint, from 08 to 04 o'clock, within 8 inch: YES	00:01:52	1261ai	
	10.48	Tap Factory Made Abandoned, at 02 o'clock, 6" within 8 inch: YES, Remark: Roots	00:02:07		
	11.58	Roots Fine Joint, from 02 to 04 o'clock, within 8 inch: YES	00:02:21		
	18.76	S1 Deposits Attached Grease, 1 % of cross sectional area, from 08 to 04 o'clock, within 8 inch: YES, start	00:02:39	1264ai	M 2
	21.56	S2 Roots Fine Joint, from 08 to 04 o'clock, within 8 inch: YES, start	00:02:54		
	53.39	Roots Medium Lateral, at 02 o'clock, 55 %, within 8 inch YES	00:05:27		M 3
	53.39	Tap Factory Made Abandoned, at 02 o'clock, 6" within 8 inch: YES, Remark: Roots	00:05:30	1268a, b	
	71.56	Roots Medium Joint, from 08 to 04 o'clock, 25 %, within 8 inch: YES	00:06:27	1269a	
	99.70	Tap Factory Made Abandoned, at 02 o'clock, 6" within 8 inch: YES, Remark: Roots	00:08:11	1270a	
	99.70	Roots Ball Lateral, at 02 o'clock, 90 %, within 8 inch: YES	00:08:16		M 4
	101.00	Broken Soil Visible, from 11 to 01 o'clock, within 8 inch: YES, Remark: Roots	00:09:13	1272a, b	S 5
	152.50	Tap Factory Made Abandoned, at 02 o'clock, 6" within 8 inch: YES, Remark: Roots	00:11:54		
	156.29	F1 Deposits Attached Grease, 1 % of cross sectional area, from 08 to 04 o'clock, within 8 inch YES, end	00:12:14		M 2
	195.12	Tap Factory Made Abandoned, at 02 o'clock, 6" within 8 inch: YES, Remark: No water stain	00:13:45		
	203.60	F2 Roots Fine Joint, from 08 to 04 o'clock, within 8 inch: YES, end	00:14:07		
	226.55	S3 Roots Fine Joint, from 08 to 04 o'clock, within 8 inch: YES, start	00:15:00		
	251.50	Roots Medium Lateral, at 02 o'clock, 55 %, within 8 inch YES	00:15:44	1278a	M 3
	251.50	Tap Factory Made Active, at 02 o'clock, 6" within 8 inch: YES, Remark: Roots	00:15:50		
	301.11	Tap Factory Made Abandoned, at 02 o'clock, 6" within 8 inch: YES, Remark: No water stain	00:17:21		
	315.88	F3 Roots Fine Joint, from 08 to 04 o'clock, within 8 inch: YES, end	00:18:03	1281a	
	325.06	Manhole, Remark: End of Segment Pipe found VCP	00:19:15		

QSR	QMR	SPR	MPR	OPR	SPRI	MPRI	OPRI
5100	4132	5	70	75	5	2.12	2.21



Inspection report

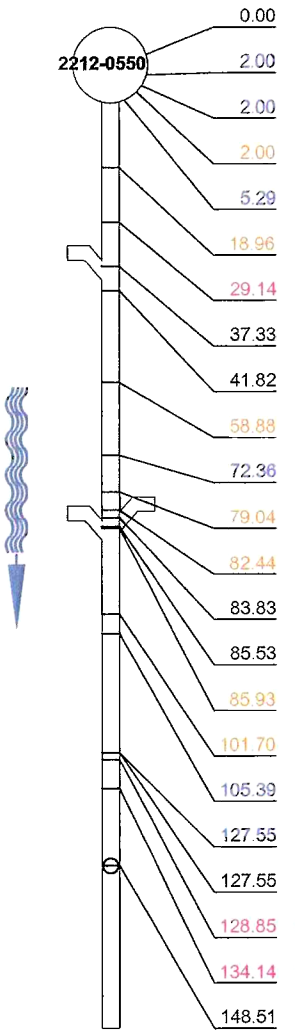
Date: 20060828	P.O.#: Y0TV0506D	Weather: 1 Dry	Surveyed By: NPS T Glock	section number: 378	PSR: 106958
Total Pipe Length: 183	Survey Customer: LACDPW	System Owner: DUA	Clean Date:	Pre-Cleaned: J Jetting	Map Grid #: 2212

Street: POPS RD R/W	Flow Control: N Not Controlled	Start MH: 2212-0550
City: DUA	Year Renewed:	End MH: 2212-0022
Location Code: D Easement/Right of Way	Tape/Media #: 018	pipe length: 184.34 ft

Reason for inspection: F Routine Assessment	Dia/Height: C Circular 8/8
Use of Sewer: SS Sanitary	Material: VCP Vitrified Clay Pipe Pipe Length: 3.0
Drain. Area:	Lining Method:
	Category:

Remark: **Cracks**

1:429	position	observation	MPEG	photo	grade
	0.00	Manhole, Remark: Start of Segment	00:01:51		
	2.00	Water Level, 10 % of cross sectional area	00:02:07		M 2
	2.00	Water Mark, 25 % of cross sectional area	00:02:09		M 2
	2.00	Crack Multiple, from 08 to 11 o'clock, within 8 inch: YES	00:02:11		S 3
	5.29	Crack Spiral, from 03 to 06 o'clock, within 8 inch: YES	00:02:26		S 2
	18.96	Crack Multiple, from 06 to 11 o'clock, within 8 inch: YES	00:03:00	1857a	S 3
	29.14	Fracture Multiple, from 09 to 03 o'clock, within 8 inch: YES	00:03:28	1858a, b	S 4
	37.33	Tap Factory Made Capped, at 02 o'clock, 6" within 8 inch: YES	00:04:17		
	41.82	Roots Fine Joint, from 08 to 04 o'clock, within 8 inch: YES	00:04:34		
	58.88	Crack Multiple, from 10 to 02 o'clock, within 8 inch: YES	00:05:05		S 3
	72.36	Crack Spiral, from 03 to 06 o'clock, within 8 inch: YES	00:05:35	1862a	S 2
	79.04	Crack Multiple, from 08 to 02 o'clock, within 8 inch: YES	00:05:59	1863a	S 3
	82.44	Crack Multiple, from 01 to 09 o'clock, within 8 inch: YES	00:06:15	1864a	S 3
	83.83	Tap Factory Made Capped, at 10 o'clock, 6" within 8 inch: YES	00:06:28		
	85.53	Tap Factory Made Active, at 02 o'clock, 6" within 8 inch: YES	00:06:42		
	85.93	Crack Multiple, from 03 to 04 o'clock, within 8 inch: YES	00:06:57	1867a	S 3
	101.70	Crack Multiple, from 11 to 01 o'clock, within 8 inch: YES	00:07:36		S 3
	105.39	Water Level, Sag in pipe, 25 % of cross sectional area	00:07:49		M 2
	127.55	Joint Offset Large	00:08:50	1870a	S 2
	127.55	Material Change, DIP Ductile Iron Pipe	00:09:06	1871a	
	128.85 S1	Camera Underwater, start	00:09:26		M 4
	134.14 F1	Camera Underwater, end	00:09:43		M 4
	148.51	Tap Factory Made, at 12 o'clock, 3" within 8 inch: YES	00:10:34	1874a	



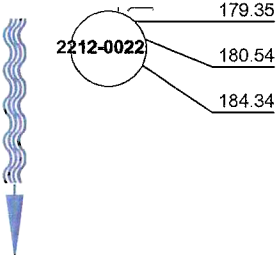


National Plant Services, INC.
 1461 Harbor Avenue
 Long Beach, CA 90813-2741
 Tel: (800) 445-3814, Fax: (562) 495-1528

Inspection report

Date: 20060828	P.O.#: Y0TV0506D	Weather: 1 Dry	Surveyed By: NPS T Glock	section number: 378	PSR: 106958
Total Pipe Length: 183	Survey Customer: LACDPW	System Owner: DUA	Clean Date:	Pre-Cleaned: J Jetting	Map Grid #: 2212

1:429	position	observation	MPEG	photo	grade
	179.35	Material Change, VCP Vitrified Clay Pipe	00:12:03	1875a	
	180.54	Tap Factory Made Active, at 10 o'clock, 6" within 8 inch: YES	00:12:20		
	184.34	Manhole, Remark: End of Segment Pipe found VCP and DIP	00:13:12		



QSR	QMR	SPR	MPR	OPR	SPRI	MPRI	OPRI
4137	4223	31	14	45	2.82	2.8	2.81



Inspection report

Date: 20060829	P.O.#: Y0TV0506D	Weather: 1 Dry	Surveyed By: NPS T Glock	section number: 414	PSR: 112616
Total Pipe Length: 234	Survey Customer: LACDPW	System Owner: DUA	Clean Date:	Pre-Cleaned: J Jetting	Map Grid #: 2166

Street: SANDEFUR ST	Flow Control: N Not Controlled	Start MH: 2166-0269
City: DUA	Year Renewed:	End MH: 2166-0264
Location Code: C Light Highway	Tape/Media #: 021	pipe length: 237.73 ft

Reason for inspection: F Routine Assessment	Dia/Height: C Circular 8/8
Use of Sewer: SS Sanitary	Material: VCP Vitrified Clay Pipe Pipe Length: 3.0
Drain. Area:	Lining Method: Category:

Remark.: **Cracks,Roots**

1:600	position	observation	MPEG	photo	grade
	0.00	Manhole, Remark: Start of Segment	00:00:46		
	4.99	Water Level, 10 % of cross sectional area	00:00:52		M 2
	4.99	Water Mark, 30 % of cross sectional area	00:00:54		M 2
	5.39	Crack Multiple, from 07 to 12 o'clock, within 8 inch: YES	00:01:12	2234a	S 3
	5.69	Tap Factory Made Active, at 10 o'clock, 6", within 8 inch: YES	00:01:27		
	43.31	Tap Factory Made Active, at 10 o'clock, 6" within 8 inch: YES	00:02:48		
	110.78	Tap Factory Made Active, at 10 o'clock, 6" within 8 inch: YES	00:04:40		
	111.98	Roots Fine Joint, from 08 to 04 o'clock, within 8 inch: YES	00:04:53	2238a	
	144.02	Tap Factory Made Active, at 02 o'clock, 6", within 8 inch: YES	00:06:04		
	145.01	Crack Multiple, from 08 to 02 o'clock, within 8 inch: YES	00:06:23	2240a	S 3
	182.44	Crack Multiple, from 07 to 05 o'clock, within 8 inch: YES	00:07:48	2241a	S 3
	223.66	Crack Longitudinal, at 01 o'clock, within 8 inch: YES	00:09:23	2242a	S 2
	223.66	Hole, at 01 o'clock, within 8 inch: YES	00:09:30	2243a	S 5
	237.73	Manhole, Remark: End of Segment Pipe found VCP	00:10:38		

QSR	QMR	SPR	MPR	OPR	SPRI	MPRI	OPRI
5133	2200	16	4	20	3.2	2	2.86



Inspection report

Date: 20060828	P.O.#: Y0TV0506D	Weather: 1 Dry	Surveyed By: NPS T Glock	section number: 374	PSR: 106954
Total Pipe Length: 274	Survey Customer: LACDPW	System Owner: DUA	Clean Date:	Pre-Cleaned: J Jetting	Map Grid #: 2212

Street: CENTRAL AV	Flow Control: N Not Controlled	Start MH: 2212-0019
City: DUA	Year Renewed:	End MH: 2212-0018
Location Code: C Light Highway	Tape/Media #: 019	pipe length: 331.25 ft

Reason for inspection: F Routine Assessment	Dia/Height: C Circular 8/8
Use of Sewer: SS Sanitary	Material: VCP Vitrified Clay Pipe Pipe Length: 3.0
Drain. Area:	Lining Method: Category:

Remark: **TVed upstream, Cracks**

1.825	position	observation	MPEG	photo	grade
	0.00	Manhole, Remark: Start of Segment	00:00:59		
	0.00	Water Mark, 25 % of cross sectional area	00:01:24		M 2
	18.96	Water Level, 1 % of cross sectional area	00:02:10		M 2
	18.96	S1 Deposits Settled Fine, 10 % of cross sectional area, from 05 to 07 o'clock, within 8 inch: YES, start	00:02:11	1909a	M 2
	37.83	F1 Deposits Settled Fine, 10 % of cross sectional area, from 05 to 07 o'clock, within 8 inch: YES, end	00:02:48		M 2
	37.83	Fracture Multiple, from 12 to 12 o'clock, within 8 inch: YES	00:02:52	1911a	S 4
	60.68	Water Level, 0 % of cross sectional area	00:04:05		M 2
	88.43	Tap Factory Made Abandoned, at 02 o'clock, 6" within 8 inch: YES	00:04:56		
	91.12	Tap Factory Made Capped, at 10 o'clock, 6" within 8 inch: YES	00:05:07		
	138.03	Tap Factory Made Abandoned, at 02 o'clock, 6", within 8 inch: YES	00:06:15		
	140.82	Tap Factory Made Capped, at 10 o'clock, 6" within 8 inch: YES	00:06:26		
	211.58	Tap Factory Made Abandoned, at 10 o'clock, 6", within 8 inch: YES	00:07:45		
	244.82	Tap Factory Made Abandoned, at 02 o'clock, 6", within 8 inch: YES	00:08:55		
	254.10	Tap Factory Made Capped, at 10 o'clock, 6", within 8 inch: YES	00:09:14		
	299.11	S2 Crack Longitudinal, at 11 o'clock, within 8 inch: YES, start	00:10:41	1920a	S 2
	302.60	F2 Crack Longitudinal, at 11 o'clock, within 8 inch: YES, end	00:10:57		S 2
	321.37	Tap Factory Made Abandoned, at 10 o'clock, 6", within 8 inch: YES	00:11:29		
	324.06	Tap Factory Made Abandoned, at 02 o'clock, 6" within 8 inch: YES	00:11:38		
	331.25	Manhole, Remark: End of Segment Pipe found VCP	00:12:11		

QSR	QMR	SPR	MPR	OPR	SPRI	MPRI	OPRI
4122	2700	8	14	22	2.67	2	2.2

ENCLOSURE 5:

CCTV Sewer Inspection Project Schedule

Duarte**CCTV PROJECT SCHEDULE**

FISCAL YEAR	YARD	SUP DIST	PROJECT NAME	LENGTH (FT)*
2005-2006	E	5	Y0TV0506D	27,779
2011-2012	E	5	5□27	212,494
			TOTAL (FT)	240,273
			TOTAL (MILES)	46

□Approximate length as of July 2005, actual project length may vary.