2018 League of Cities Public Works Conference
STRATEGIES FOR ACHIEVING SUPERIOR PROJECT SUCCESS

CASE STUDY
Thousand Oaks Boulevard Utility Undergrounding Project

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Division Manager – Capital Projects
City of Thousand Oaks
AGENDA

• Project Overview
• Challenges
• 5 Key Factors for Success
PROJECT OVERVIEW VIDEO

https://www.youtube.com/watch?v=yz2PD9xLzEE
PROJECT BENEFITS

- Increased safety
- Limit future tree topping
- Enhanced aesthetics
- Increased reliability
- Improved pedestrian and ADA access
- Provides room for Westlake High School future stadium expansion
## OVERALL PROJECT COSTS

<table>
<thead>
<tr>
<th>Category</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>DESIGN/ENGINEERING</td>
<td>$800,000</td>
</tr>
<tr>
<td>CONSTRUCTION Contract</td>
<td>$5,000,000</td>
</tr>
<tr>
<td>OUTREACH + CONST. SUPPORT</td>
<td>$200,000</td>
</tr>
<tr>
<td>UTILITIES</td>
<td>$7,900,000</td>
</tr>
<tr>
<td><strong>TOTAL COSTS</strong></td>
<td><strong>$14,000,000</strong></td>
</tr>
</tbody>
</table>

### FUNDING

- RDA Bond Proceeds - $10,400,000
- General Fund - $3,600,000

3 CO’s (-$79,000)
• 88 pull boxes and structures placed underground
• 100,000’ of new conduits installed across 4 miles of roadway trenching
• Trenches up to 18’ deep, footings up to 26’ deep
• Successfully crossed 400 underground utilities
• 18 new large vaults installed underground
• 15 weeks of night work to minimize impact to public
• Average work force: 15-20 workers onsite daily
PROJECT CHALLENGES

Undergrounding of 53 Poles & Wires
• 1.5 Miles (10 Mega City Blocks)

6 different utility agencies to be coordinated
• SCE 66kV, SCE 16kV, TW Cable, Crown Castle, Sunesys, Traffic Fiber

4 miles of trenches
• Up to 18’ deep (20 miles of conduit)

400+ utility crossings

15 months total field duration
• 4 months of night work and up to 3 shifts/day
RIP Godzilla
3.02.17
#TOB
HOW DO WE GET FROM HERE

PROJECT COMPLETION GOALS

☐ UNDER BUDGET
☐ ON TIME
☐ MINIMAL COMMUNITY IMPACT
PROJECT COMPLETION GOALS

- UNDER BUDGET
- ON TIME
- MINIMAL COMMUNITY IMPACT
Key Factors for Success

I. Robust Community Outreach
II. Use of Emerging Technologies
III. Advanced Engineering and Utility Research
IV. Focused Collaboration with All Stakeholders
V. Innovative Contracting Strategies
I.
Robust Public Outreach and Community Engagement
Focused Outreach Strategies:

- Dedicated Hotline & Website [www.toaks.org/undergroundTOB](http://www.toaks.org/undergroundTOB)
- Use of Specialty Consultant team
- Create project logo and branding
- Advance Interface with all HOA’s
- Coordinate with TOBA/BID, Chamber, Auto Mall
- Meet with large Shopping Centers
- Door to Door Canvassing of all businesses
- Collaboration with all Agencies (Gas Co, SCE, etc)
- MEDIA - City Website, Newspapers and New Media Tools
PUBLIC ENGAGEMENT & OUTREACH

Use of Logo and Branding to create awareness

Consistent on Website, printed materials, letters, emails, project ID boards, etc.
Interface with residents and businesses
• Direct communication and Leadership from City Project Manager
• Connecting with appropriate party (prop owner, tenant or retailer?)
• Err on side of Overcommunication!
Interface with residents and businesses

VENUE
Mixture of 1-on-1 discussions, and larger community meetings
Written communication

Old method of communication

ADVANCED CONSTRUCTION NOTICE
High-Maintenance Drainage Relief Improvements and Replace Corrugated Metal Pipes Project

The City is in the process of awarding a contract to J & H Engineering in the amount of $150,378 to install surface and subsurface drainage improvements. They include flow line reconstruction by asphalt milling and overlay, installation of concrete curb gutters, installation of a rock-lined swale, replace and upgrade damaged storm drain pipes, install catch basins and curb inlets. Work is to be done at various locations throughout the City, see Attachment 1-Vicinity Map, and Attachment 2-Drainage Plan, that shows the improvements on your street.

Construction is expected to start in July 2015 and be completed by October 2015. J&H Engineering will notify the affected properties in your neighborhood seven days prior to beginning construction.

- Contractor’s access to the construction sites will be 7:00 A.M. to 4:00 P.M. Monday through Friday.
- During construction, temporary barriers will be at the existing sites. No prolonged lane closures are expected.
- Please exercise extreme caution when passing through construction work zones or driving near construction workers.

Please contact Mike Tohirian, Project Manager, (805) 449-2516 with questions or comments. Please see reverse side for construction location.
Use of printed materials

- **Targeted info for high-impact businesses**
- **Available in print and digital formats**
- **Includes a variety of resources**
- **Packaged in project-branded folder**
- **Distributed during in-person visits**
PUBLIC ENGAGEMENT & OUTREACH

Use photo renderings to convey project impacts and benefits

CONSTRUCTION PHOTOS: EXAMPLES

- Drilling for New Pole Foundation
- Equipment and Crane
- Trucks Equipment Lane Closure
- Trucks Excavation Lane Closure
- Installing New Subsurface Vault
- Lifting New Subsurface Vault
PUBLIC ENGAGEMENT & OUTREACH

66,000 Volt Cable
Actual
Business Outreach
Being a good neighbor
Being a good neighbor
Public Outreach

Media Strategies
Traditional Media Coverage

**Gallery: Thousand Oaks brings utilities infrastructure underground**

On the second week of a yearlong project, workers in Thousand Oaks began installing large underground vaults as part of an extensive utility system that will be largely unseen. The $15 million infrastructure project will bring overhead poles and wires on 1.5 miles of Thousand Oaks Boulevard below ground. Motorists will see lane closures on the boulevard from Dossett Drive to Via Medica near Westlake High School.

**Thousand Oaks gets ready for major underground utilities project**

CONTRIBUTED PHOTO Utility poles in a stretch of Thousand Oaks Boulevard will go underground when the city begins a $15 million project in early March.

**Boulevard’s facelift**

*Thousand Oaks taps bond issues*

BY KEVIN KREUTZ Staff Writer

Armed with the proceeds from a $76.7 million bond offering, Thousand Oaks is prepared to address an eyesore and a sore spot, among other things, including the Civic Arts Plaza. But the offerings also provided $22.5 million for improvements to Thousand Oaks Boulevard and for affordable housing projects in the city. Money from the bonds should be in the city’s possession by mid-
TO Blvd Undergrounding

Construction Updates
Phase 3, which will complete the final sidewalk restoration activities along the Boulevard, is currently under way. This final phase of the project is anticipated to be completed by the end of Summer 2017.

The City’s Division Manager of Capital Projects Nader Heydari discussed the Thousand Oaks Boulevard Undergrounding Project on the latest edition of Talk of the Town.

About The Project
The City partnered with local utility companies Southern California Edison, Spectrum, and Crown Castle to improve Thousand Oaks Boulevard by removing approximately 1.5 miles of overhead electrical wires and 33 electrical poles, from Duetsenberg Drive to Westlake High School at Via Merida.

The project was primarily funded by Redevelopment Agency bond proceeds, along with a contribution from the General Fund. Startec, Encompass Consultant Group, Circolpoint, and Richard Campbell provided design and construction support services on the project. Construction of the new underground system was performed by Northwest Excavating.
New Media

The end is in sight for project tasked with hiding utility wires out of sight.

Huge milestone for the TOB Undergrounding project as the very first portions of the overhead electrical wires have been removed!
New Media – additional ideas
Create an Outreach Plan

<table>
<thead>
<tr>
<th>Implement for this project?</th>
<th>Communication Strategy</th>
<th>Target Dates</th>
<th>Done?</th>
<th>Timeframe</th>
<th>Notes / Comments</th>
<th>Assigned</th>
</tr>
</thead>
<tbody>
<tr>
<td>Outreach Planning</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Develop Project Outreach Plan &amp; Complete this template</td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Identify Stakeholders and develop list</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Consider Residents, Businesses affected (HOA’s, Chamber, PTA, TOBA, School, etc)</td>
<td></td>
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<tr>
<td>Assign responsibilities</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Use Michelle’s responsibility Matrix</td>
<td></td>
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<tr>
<td>Online Tools</td>
<td></td>
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<tr>
<td>Develop Key Messaging</td>
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<td></td>
<td></td>
<td>Clear &amp; consistent messaging for website, front counter staff, all print and electronic materials</td>
<td></td>
</tr>
<tr>
<td>Custom Project Logo?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Develop logo consistent with branding for use in Advertisements, social media, website, print &amp; electronic materials</td>
<td></td>
</tr>
<tr>
<td>Dedicated Project Hotline and email address?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Prepare photo simulations, Before/After images, Street Map, Water Task Schedule and other</td>
<td></td>
</tr>
<tr>
<td>Special Graphics / Maps / GIS</td>
<td></td>
<td></td>
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</tbody>
</table>
Outreach – recap

The “New Norm” – Public Expectations are higher

Make use of all different forms of media and meeting venues

Develop a Public Outreach Plan @ preliminary design phase

Efforts paid off - only received 17 comments/complaints
II.
Leveraging use of Emerging Technologies
New Technology
Daily Inspection Reports

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**CITY OF THOUSAND OAKS**
PUBLIC WORKS DEPARTMENT
DAILY CONSTRUCTION REPORT

**Dates:** Aug 09, 2016
**Time:** 5:30pm

**PROJECT:** Thousand Oaks Blvd. Utility Undergrounding Project
**PROJECT NO.:** CL/6351

**OWNER:** City of Thousand Oaks

**CONTRACTOR:** Northwest Excavating
**CONTRACTOR’S PROJ MGR:** Nadir Haydar and Jorge Martinez
**CONTRACTOR’S FIELD SUPERINTENDENT:** Ken Berry and Juan Delgado

**WEATHER:**
- **DATE:** Aug 09, 2016
- **SKY:** Clear
- **TEMP:** 84°F
- **HUMIDITY:** 30%

**HUMIDITY:** Normal
**DAYS:** 1

---

**AVERAGE FIELD FORCE (Number of Workers):**

<table>
<thead>
<tr>
<th>Worker Classification</th>
<th>No. of Workers</th>
<th>Worker Classification</th>
<th>No. of Workers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operator</td>
<td>1</td>
<td>Operator</td>
<td>1</td>
</tr>
<tr>
<td>Foreman</td>
<td>1</td>
<td>Foreman</td>
<td>1</td>
</tr>
<tr>
<td>Equipment Utilized</td>
<td>Yes</td>
<td>Equipment Utilized</td>
<td>Yes</td>
</tr>
<tr>
<td>Ditch Ditch</td>
<td>1</td>
<td>Ditch Ditch</td>
<td>1</td>
</tr>
<tr>
<td>Total</td>
<td>4</td>
<td>Total</td>
<td>4</td>
</tr>
</tbody>
</table>

**SUBCONTRACTORS:**

- Company Name: [Redacted]
- No. of Workers: [Redacted]

**FIELD VISITORS (Inspectors, Utility Company Reps. & Others):**

<table>
<thead>
<tr>
<th>Company / Visitor Name</th>
<th>Company / Visitor Name</th>
<th>Company / Visitor Name</th>
</tr>
</thead>
</table>

**CONSTRUCTION ACTIVITIES:**

- Continue distribution/cone m. brch excav - all stations are approx.
- 11:45: Excavation depth = 97.6" - conduct TOP = 8'-6".
- 11:50: - condition 2" of cone m. brch & gatre TOP = 87" - conduct TOP = 87".
- 12:15: - unknown condl TOP = 2" (may be ran fiber) - conduct TOP = 87".
- 12:16: - unknown excavation depth = 106" - conduct TOP = 87".
- 12:17: - total yards of sherry was placed.

**Field Notes:**

- 12:17: - [Additional notes]
- 12:18: - [Additional notes]
- 12:19: - [Additional notes]
Geotagged photos
Quick photo markups

10’7” from curb face
37” deep

Bad repair plug
Good repair plug
Drawing Markups
3D Printing
Remote Monitoring of jobsites
III.

Advanced Engineering and Utility Research Efforts
Advanced Engineering and Design Efforts
Advanced Engineering and Design Efforts
Advanced Engineering and Design Efforts
Focused efforts:
- Perform multiple potholes (at least at key/questionable areas)
- Combine all available existing info (GIS, Record Drawings, Potholing, Field review, institutional knowledge) into 1 source
- Combine all new design into 1 master utility engineering set
- Don’t trust utility co. as-builts (Gas Co) – force them to mark it
- Numerous Meeting w/ Utility Agencies and Involve their field and construction staff (don’t rely on planners)
- Prepare SWPPP during design phase
- Perform 3rd part Peer review (internal and external)
Special Engineering and Design Efforts

Prepare SWPPP during Design Phase
• Handoff to Contractor on day 1
Project Schedule

PROJECT TIMELINE

- Exploratory Utility Investigation: Summer 2015
- Bid & Award: Fall 2015
- Phase 1 Construction: March 2016
- Phase 2 Construction: September 2016
- Completion of Phase 1 & 2: Winter 2017
- Project Completion: Summer 2017
Advanced Engineering and Design Efforts
IV.

Focused Collaboration
Collaboration

Managing Agency:

City of Thousand Oaks
Public Works Department
Capital Projects Division

Project Partners:

City of Thousand Oaks Public Works

Southern California Edison
An Edison International® Company

Stantec
ECG
Northwest Excavating
Crown Castle
Spectrum
Circlepoint
Collaboration

- Multi-Agency Collaboration/Coordination
  - Intra-Department
  - Inter-Department
  - Liaison/Relations with Other Agencies
  - Collaboration with local businesses
Collaboration

- Multi-Agency Collaboration/Coordination
  - Intra-Department
    - Operations, Capital Projects, Engineering, GIS, Traffic
Collaboration

• Multi-Agency Collaboration/Coordination
  - Intra-Department
    • Operations, Capital Projects, Engineering, GIS, Traffic
  - Inter-Department
    • Public Works, Finance, City Manager, City Clerk City Attorney
Collaboration

• Multi-Agency Collaboration/Coordination
  - Intra-Department
    • Operations, Capital Projects, Engineering, GIS, Traffic
  - Inter-Department
    • Public Works, Finance, City Manager, City Clerk City Attorney
  - Liaison/Relations with Other Agencies
    • Police & Fire Dept - Nixle, Traffic Control, Pre-Eemption
    • Cal Water – coordinate timing of projects to avoid schedule overlap
    • SCE – Coordinate resources, schedules, priorities
    • Open Space - easement for new transformer
Collaboration with SCE 24/7
Local businesses (2-way support)
**Collaboration**

**Local businesses (2-way support)**

- **Manfredi**
  - Provided New TSP and easement
  - Upgrade gate and parking lot (city)

- **Starbucks/Bank**
  - Provided Temp Parking
  - Removal of trees (city)

- **Auto Mall / Dealers**
  - Avoid work during November/December, memorial day, july 4th, etc

- **TOBA & Chamber**
  - Help provide business open signs and promote businesses in city newsletter

- **Car Wash**
  - Timing to avoid impact during warm months
Collaboration
V.

Innovative Contracting Methods / Strategies
New Capital Project Delivery Model

- Revamp and develop a progressive new CIP Project Delivery Model
  ✓ Single team leader / project manager throughout
  ✓ Empower staff to make decisions
  ✓ Perform extensive Utility Engineering & Investigation
  ✓ Undergo Significant constructability reviews (multiple parties)
  ✓ Additional advance Potholing and design coordination
  ✓ Focus on Direct Public Outreach
  ✓ Self perform all engineering management & construction management
  ✓ Utilize emerging technology
New Capital Project Delivery Model

- Advanced Management and Project Delivery Efforts
- Optimize in-sourcing vs out-sourcing of Services
- Relationship building with Contractor
- Construction Planning
New Capital Project Delivery Model

• **Advanced Planning and Management Efforts**
  - City took on lead management role on entire project
  - Pre-Qualify all contractors prior to bid
  - Use small design/build or deferred submittal packages

• **Optimize in-sourcing vs out-sourcing of Professional Services**
  - City performed Engineering, CM and Inspection work in-house
  - City handle QSP in-house
  - Utilize On-Call Master Agreements

• **Relationship building with Contractor**
  - Partnering with Contractor (Start at Pre-Qual Phase)

• **Construction Planning**
Construction Planning & Controls

- Eliminate disruptions during peak hours or holiday season
- Avoid any overlap with 101/23 & Erbes Rd Projects
- Utilize night work at key areas and intersections
- Start at western end in winter, focus on WHS in summer
- Work Double & Triple shifts (up to 21 hours/day)
- Assist contractor with staging area & noise issues
- Be open minded about alternative construction
- Track schedule and as-builts monthly
Construction Planning & Controls
Construction Progress

Project Start Date: Mar. 1

- APR, 10%
- MAY, 20%
- JUN, 30%
- JUL, 45%
- AUG, 60%
- SEPT, 75%
- OCT, 90%

% WORK COMPLETE

Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov
--- | --- | --- | --- | --- | --- | --- | --- | ---
0% | 10% | 20% | 30% | 45% | 60% | 75% | 90% | 100%
# Phasing

## Overall Schedule Milestones

<table>
<thead>
<tr>
<th>Construction Phase – Civil Work (City)</th>
<th>October 2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>Install and Energize new Underground Utilities, Connections, Pole Removals (SCE &amp; Utilities)</td>
<td>October 2016 – April 2017</td>
</tr>
<tr>
<td>Final Sidewalk and Asphalt Repairs (City)</td>
<td>April 2017 – June 2017</td>
</tr>
</tbody>
</table>
Trench Repairs – faster and better
Trench Repair
Staging and Storage of Materials
City’s Busiest Intersection
Night Work @ Key Intersections
Night Work
Orientation of trench & Traffic Control
As-built as you go
PROJECT AWARDS
QUESTIONS?

Website:  [www.toaks.org/undergroundtob](http://www.toaks.org/undergroundtob)