ONWARD ENGINEERING
design smarter. build better.
300 S. Harbor Blvd.
Suite 814
Anaheim, CA 92805
(714) 533.3050
www.oe-eng.com

REQUEST FOR PROPOSAL

CITY OF FONTANA

ENGINEERING AND DESIGN SERVICES

STREET IMPROVEMENT PROJECT AT RANDALL AVENUE, FROM CITRUS AVENUE TO CATAWBA AVENUE

CITY OF FONTANA CALIFORNIA | ENGINEERING AND DESIGN SERVICES
8353 SIERRA AVENUE | FONTANA, CA 92335 | PHONE: (909) 350-7600

FONTANA
CALIFORNIA

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City of Fontana
8353 Sierra Avenue
Fontana, CA 92335

December 15th, 2022

SUBJECT: STREET IMPROVEMENT AT RANDALL AVENUE, FROM CITRUS AVENUE TO CATAWBA AVENUE

Onward Engineering (OE) is pleased to submit this proposal to provide Engineering and Design Services for the Street Improvement Project at Randall Avenue, from Citrus Avenue to Catawba Avenue for the the City of Fontana. This type of project is our specialty, as 90% of our work is roadway improvements (resurfacing and rehabilitation) and parkway improvements. Projects like this improve the quality of life for drivers, residents and pedestrians, providing greater access for pedestrians to reach their destinations and safer driving conditions for drivers. This is the type of project that we love to take on, because it leaves such a clear and positive impact on the community. Additionally, we have the personnel and resources to commit to the City's schedule (full design by July 2023). In fact, our schedule anticipates that we would be able to complete the design nearly a month early. Once we commit to a schedule, we make sure not to overcommit our resources or stretch them thin, so that we can meet the milestones indicated in our proposed schedule. To do this, we make you our priority throughout the design phase, and we meet regularly so that our workload and progress is clear to the City, and that transparency gives the City peace of mind.

Our team is the heart of our business. Our innovative Project Engineers, led by Justin Smeets as the Project Manager and Majdi Ataya as the QA/QC Manager, will apply their professional skills to prepare a complete PS&E package for the City of Fontana. Our team is able to think innovatively and proactively to meet the City's short-term and long-term goals for this project. Our team has already conducted a preliminary field walk, so that we are able to hit the ground running if selected. Ryan Dennis, P.Eng., Dayton Lowe, Riley Moore, EIT, David Loria, Jason To, Henry Lu and Leonard Phung,comprise our team of Project Engineers. Our team has worked together on a number of similar projects, allowing us to provide a seamless, confident, and familiar team dynamic.

Our team also puts a great emphasis on QA/QC. Our PS&E submittals will go through three levels of review prior to each submittal which allows for error mitigation on separate levels of detail: ground level (drafting, calculations, and document formatting), project management level (design and project intent compliance) and quality assurance level (completeness of documents and checking that we have a set of "biddable" plans). By instituting this three-tiered approach, we check that plans are consistent, clear, correct, constructible, and complete (5 C's).

I would like to thank the City of Fontana for the opportunity to submit our proposal. If you have any questions, or would like any additional information, please feel free to contact me at: (714) 533-3050, or by email at: mataya@oe-eng.com. We acknowledge receipt of Addendum 1 and we thank you for the opportunity to serve the City of Fontana.

Thank you,

Majdi Ataya

Majdi Ataya, PE
President, Onward Engineering

1 PROPOSED PROJECT TEAM

ORGANIZATION CHART

QA/QC MANAGER

MAJDI ATAYA, PE

BS: Civil Engineering, *CSULB, 1981*
MPA: Full Coursework, *CSULB, 1993*
PE: Professional Engineer **#39392**
CITY OF LA HABRA: (former) Deputy Director of Public Works
(former) City Engineer

PROJECT MANAGER

JUSTIN SMEETS, PE,PLS,QSD

BS: Civil Engineering, *CSUF, 2007*
PE: Professional Engineer **#78314**
PLS: Professional Land Surveyor **#9293**
QSD: Qualified SWPPP Developer **#00852**
OCTA: (prior) CERTIFIED Pavement Rehabilitation

PROJECT ENGINEERS

RYAN DENNIS, P. ENG.

BS: Civil Engineering,
-University of Calgary, 2005
MINOR: Environmental Engineering,
-University of Calgary, 2005
P. ENG.: Professional Engineer *(Canada)*
CAD: AutoCAD & Civil 3D

DAYTON LOWE

OCTA: (prior) Certified: Pavement Assessment, Rehabilitation & Recommendations
COURSES: Construction Management, Technology, & Civil Engineering, *Broward College*
CAD: AutoCAD & Civil 3D

RILEY MOORE, EIT

BS: Civil Engineering, *CalPoly Pomona, 2020*
AS: Architectural Design - *OCC, 2016*
EIT: Engineer-in-Training, **#174122**
TECH: AutoCAD, Civil 3D, MicroStation, Revit, BlueBeam, & HDL

DAVID LORIA

AS: Computer Animation,
-Brooks College, Long Beach
CERTIFIED: AutoCAD Certified Professional
TECH: Civil 3D, Revit, 3D Max, Recap, Scan Master point cloud processing software

JASON TO

BS: Civil Engineering, CSUF, Fullerton
SKILLS: AutoDesk/AutoCAD & ArcGIS/RAM
EXPERIENCE: Surveying/Soil Mechanics/Reinforced Concrete & Structural Steel Design

H.L. HENRY LU

BS: University of Transport, Ho Chi Minh, Vietnam
DESIGN: Roadway/Drainage/Slope Stability/Utility
CAD: AutoCAD/Civil3D

L.F. LEONARD PHUNG

BS: University of Transport, Ho Chi Minh, Vietnam
DESIGN: Roadway/Drainage/Slope Stability
CAD: AutoCAD/Civil3D/InfraWork

NOTE:

key personnel will be available to the extent proposed for the duration of the Project and no person designated as "key" to the Project shall be removed or replaced without the prior written concurrence of the City.

2 PROJECT UNDERSTANDING & APPROACH

PROJECT UNDERSTANDING

The City of Fontana is seeking a qualified firm to provide professional engineering services for the Street Improvement Project at Randall Avenue from Citrus Avenue to Catawba Avenue. The purpose of the project is to rehabilitate approximately 1,300 linear feet (0.25 miles) of pavement on Randall Avenue and close curb, gutter, and sidewalk gap on the north side of the street. The street varies in width but primarily consists of one eastbound lane, two westbound lanes, and parking lanes on both sides of the street. Surrounding land use consists primarily of residential zones and Citrus Elementary School on the south side of the street.

SITE MAP RANDALL AVENUE, FROM CITRUS AVENUE TO CATAWBA AVENUE

DESIGN COMPONENTS

- Pavement rehabilitation.
- Curb, gutter, and sidewalk construction.
- ADA curb ramp construction.
- Utility appurtenance adjustments & relocations.
- Signing and striping enhancements.
- ADA driveway construction.

TOWN MILESTONES

1. Design Commencement – December 2022
2. Design Completion – July 2023
3. Construction Commencement – November 2023

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PROJECT WORKFLOW

1. **RECORDS RESEARCH** - Review available as-built records, topographic survey data, geotechnical reports (if available), as well as other data available from the City and third-party sources to assist in the preparation of the engineering design and construction plans.
2. **UTILITY RESEARCH** - Identify all existing above ground and underground utilities and verify pertinent utility data (i.e. location, size, depth, type, etc.). Notify all utility owners of planned construction and modify, relocate, or protect in place all utilities.
3. **TOPOGRAPHIC SURVEY** - Conduct a topographic survey to document existing site features and elevations to facilitate the development of the base map and vertical profiles.
4. **DRONE MAPPING** - Collect high resolution aerial photographs of the streets to enhance the accuracy of the base map features including site geometry and utility appurtenance locations.
5. **SITE EVALUATION** - Conduct a site evaluation to document the condition of existing infrastructure and verify utility appurtenance locations. Identify design constraints based on site conditions.
6. **UTILITY POTHOLING** (IF REQUESTED) - Conduct utility potholing to verify utility locations and depths and ensure there are no conflicts within the proposed design.
7. **PLANS, SPECIFICATIONS, ESTIMATES (PS&E)** - Develop construction plans, specifications, and estimates (PS&E) that include pavement rehabilitation, curb, gutter, and sidewalk construction, ADA curb ramp and driveway construction, utility appurtenance adjustments/relocations, and signing and striping replacement.
8. **REGULATORY COMPLIANCE** - Check that all designs adhere to the applicable state and federal standards, including ADA requirements.
9. **BID AND CONSTRUCTION SUPPORT** - Provide the necessary support to the City to execute that Bid and Construction Phases of the project.

PROJECT APPROACH

DRONE MAPPING

The site assessment will be enhanced with the collection of high-resolution aerial photographs of the street using our drone. Our team has three remote pilots licensed by the FAA to fly drones for commercial use. The aerial photographs allow us to accurately denote site surface features, pavement condition, and street striping, as well as providing us with highly detailed reference data that cannot be achieved through traditional site evaluation methods. Additionally, the images collected are at a higher resolution than images provided by other sources and are ideal for use in the preparation of exhibits. The image below, collected for a previous project, demonstrates the level of detailed information that can be collected using drone technology. The aerial photos collected are merged into a composite image in post-processing to create complete street segments with very high levels of detail.

ADA RAMP DETAIL

ASPHALT CRACKING

PAVEMENT REHABILITATION

Based on preliminary field observations, the pavement is in poor condition on the south side of the street with widespread block cracking, and in very poor condition on the north side of the street with widespread alligator cracking. The recommended treatment for a street in this condition would be a grind and overlay on the south half of the street and full depth reconstruction on the north half of the street. Other paving methods such as recycled asphalt pavement and fiber reinforced asphalt will be evaluated during the design phase, and a final determination will be made following discussions with the City and a review of the preliminary site research which may include, pavement management plans, geotechnical recommendations (if available), construction budgets, and cost benefit analyses of the preliminary design options.

EXISTING CURB, GUTTER, AND SIDEWALK REPAIRS

Based on preliminary observations, the existing curb, gutter, and sidewalk are generally in good condition. A detailed assessment will be conducted to identify areas requiring repairs that will be included in the construction plans. At a minimum, curb and gutter should be reconstructed where drainage is affected, and sidewalk should be replaced where not in compliance with ADA requirements (i.e. heaved sidewalk panels, minimum path widths). Additional reconstruction to replace sections where minor cracking or breakage has occurred could also be undertaken to improve aesthetics and prevent further degradation that could affect ADA compliance, drainage, or public safety in the future.

Damage to pavement, curb, gutter, and sidewalks due to the infiltration of tree roots will also be documented. Tree roots under affected infrastructure to be reconstructed should be exposed and assessed by a licensed arborist to determine if the roots can be removed without affecting the health of the tree. If safe to do so, the roots can be trimmed, and a barrier can be installed to prevent the roots from re-infiltrating areas of concern.

NEW CURB, GUTTER, AND SIDEWALK CONSTRUCTION

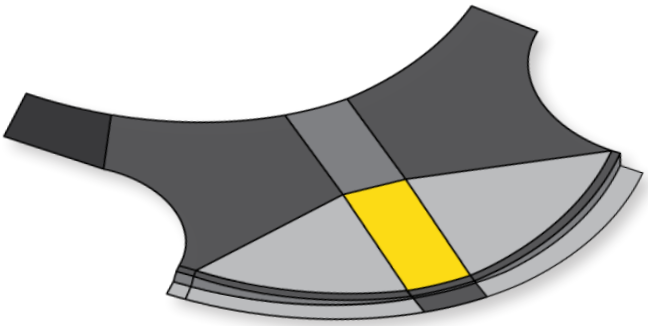
The new curb, gutter and sidewalk proposed on the north side of Randall Avenue will be graded to encourage excess stormwater run-off to flow from the back of sidewalk to the street gutters. If space permits, parkway can be placed between the sidewalk and curb to manage some of the run-off through percolation. Sidewalks will be constructed with maximum cross-slopes of two percent and minimum widths of 4 feet to achieve ADA compliance. A straight grade will be applied across the new gutter section to maximize the slope between the ends where tying into existing gutters. All improvements will be designed to minimize impacts to the existing utility appurtenances and private parcels.

ADA CURB RAMPS AND DRIVEWAYS

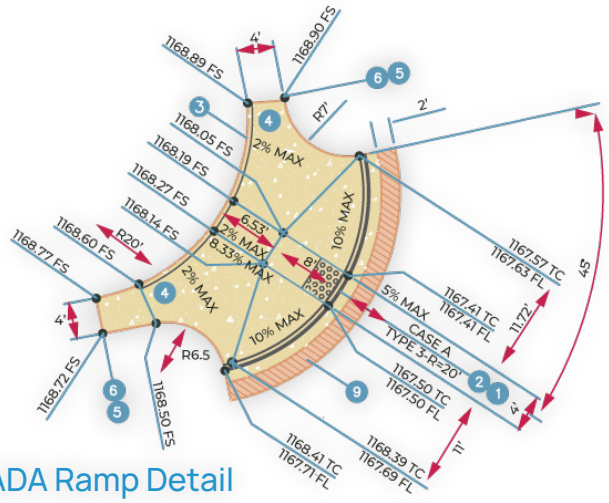
Based on a preliminary evaluation of the project limits, a total of 9 curb ramps have been identified that do not appear to satisfy ADA requirements. In addition, a total of 12 driveways will need to be reconstructed to accommodate the new curb, gutter, and sidewalk and achieve ADA compliance.

The curb ramps and driveways will be designed as 3-dimensional surfaces in Civil 3D to ensure that the ADA slope and dimension requirements are adhered to. Individual curb ramp and driveway details will be prepared for the construction plans and will include horizontal geometrics and design elevations.

If a ramp cannot be designed to achieve complete ADA compliance due to limiting site factors such as intersecting street and sidewalk grades, the ramp will be designed to be as compliant as possible, and a Curb Ramp Memo signed by a Professional Engineer will be prepared.



3D Ramp Detail



ADA Ramp Detail

Based on the available right-of-way, it is anticipated that access to private properties might be required to construct the driveways and/or curb ramps; therefore, Temporary Construction Easements would be required.

SITE GRADING

A limited geotechnical investigation has been included as an optional item to verify the existing pavement structural section and evaluate the parkway subgrade for suitability for backfill. It is anticipated that site grading will primarily consist of excavating soil to accommodate the new curb, gutter, and sidewalk, backfilling beneath and behind the new sidewalks to support the structure, and contouring the existing land between the sidewalk and City right-of-way to manage surface run-off.

DESIGN CONFLICTS

Potential design conflicts observed during the preliminary site evaluation included:

1. Fences
2. Mailboxes
3. Retaining curbs and walls
4. Street signs
5. Trees
6. Utility poles

OE will begin identifying all the design conflicts to determine which items need to be relocated or removed, or where modifications to the design is the preferred approach. Third party utility owners such as SCE require long lead times if relocation of their utilities is required. Impacted utility owners will be engaged early in the design process to coordinate the relocation of utility appurtenances when the responsibility to relocate falls on the utility owner.

TEMPORARY CONSTRUCTION EASEMENTS

OE will attempt to design the improvements to minimize the encroachment into the private parcels by constructing the sidewalk, curb ramps, and driveways within the existing City right-of-way. Based on our initial site evaluation, Temporary Construction Easements (TCEs) may be required for up to ten properties located on the north side of Randall Avenue.

A final determination of the locations where temporary construction easements are required will require survey of the project limits to verify the right-of-way boundaries and comparison of those boundaries to the final design of the improvements. A cost for the preparation of legal descriptions and plats for the parcels of land where TCEs are required has been provided with the fees of this assumed scope.

VALUE ENGINEERING

COST SAVING MEASURES

The following cost saving measures may be incorporated into the scope of work:

DRONE MAPPING

Drone mapping will be utilized to document striping configurations and pavement conditions and prepare more accurate base maps reducing the amount of site evaluation documentation required.

PAVEMENT ENGINEERING

OE will assess the feasibility of utilizing alternative paving methods to reduce construction costs, reduce maintenance costs, and/or extend the service life of the pavement.

RIGHT-OF-ENTRY:

To minimize the number of Temporary Construction Easements required, OE can seek to gain Right-of-Entry agreements from the private property owners where feasible to allow the contractor to conduct work on the private property. This agreement is generally used when the contractor needs to perform work on a property but does not intend to reconstruct anything. It is most likely that this can be achieved for this project if access is only required for re-grading the soil.

LESSONS LEARNED

The following is a description of some lessons learned on other projects of similar scope that can be applied to this project to improve efficiencies:

RECURRENT PROJECT MEETINGS

It is recommended that progress meetings be conducted every two weeks or twice monthly between the City PM, Consultant PM, and Consultant Design Engineer. These approximately 30-minute meetings conducted via video conference or telephone allows the Consultant to give the City a brief update on the progress of the project and

to discuss new design approaches and challenges. This continuous engagement assists in keeping the project on track to meet milestones and reduces the amount of time the City needs to spend reviewing the PS&E as many of their comments and concerns will have already been addressed.

BASE MAP ACCURACY

To ensure that the base maps are accurate and complete, the site evaluation will be conducted once the drone mapping, topographic survey data, and utility as-built information has been incorporated into the base maps to verify that utility appurtenance locations and ownership are portrayed correctly.

ADHERENCE TO BUDGET

Significant changes to the design can be costly and delay milestones, particularly on larger scale projects. Therefore, the budget will be strictly adhered to throughout the design phase and all construction items will be quantified as accurately as possible early in the design process to prevent scope creep.

THIRD PARTY COMMUNICATION

Early and continuous communication with third parties will be critical to minimize delays to the project schedule. OE will identify key personnel within organizations and provide complete design plans as early as feasible to minimize review cycles.

SCOPE OF WORK

1 SITE RESEARCH PHASE

1.1 / 1.2 / 1.3 | MEETINGS: KICK-OFF, BI-WEEKLY PROGRESS(X10), PLAN CHECK (X3)

Meeting Minutes and Agenda (digital copy) - Project Schedule (digital copy - to be updated as necessary)

1.4 | RESEARCH AND REVIEW AVAILABLE DATA

Existing Records Matrix (digital copy) - Copies of Existing Records (digital copies)

1.5 | UTILITY RESEARCH AND NOTIFICATION

Utility contact matrix (digital copy) - First, second and final utility notices, utility notification log, and correspondence to each utility owner (digital copies)

1.6 | TOPOGRAPHIC SURVEY

Topographic survey basemap, CAD survey files (digital copies)

2 PRELIMINARY DESIGN PHASE

2.1 | BASE MAPS

Street, Right-of-Way, and Utility Base Maps (digital copies)

2.2 | SITE EVALUATION

Site Evaluation Notes and Photos (digital copies)

2.3 | 30% PS&E

30% PS&E (digital copies)

3 FINAL DESIGN PHASE

3.1 | 65% PS&E

65% PS&E (digital copies) - Submittal review comments/responses and red-lined plans (digital copies – PDF format)

3.2 | 90% PS&E

90% PS&E (digital copies) - Submittal review comments/responses and red-lined plans (digital copies – PDF format)

3.3 | 100% PS&E

- 100% Plans (hard copies – 24" x 36" format on bond paper, 24" x 36" double matte 4mm Mylar sheets – signed and stamped)
- 100% Specifications (hard copy – bound)
- 100% Construction Cost Estimate (hard copy)
- Complete PS&E Package (digital copies – USB thumb drive)
- AutoCAD and PDF design files (digital copies – USB thumb drive)

4 BID ASSISTANCE AND CONSTRUCTION SUPPORT PHASE

4.1 | BID ASSISTANCE AND CONSTRUCTION SUPPORT (X16 CONSTRUCTION MEETINGS, RFI RESPONSE, AS-BUILTS)

- Responses to Design Inquiries (digital copies)
- As-built drawings (hard copy - 24" x 36" double matte 4mm Mylar sheets – signed and stamped)
- Autocad and PDF design files (digital copies – USB flash drive)

5 OPTIONAL TASKS

5.1 | UTILITY POTHOLING (PER DAY; 5 SHALLOW OR 2 DEEP POTHOLES)

Potholing summary (digital copy)

5.2 | LEGAL DESCRIPTIONS, EXHIBITS, AND LAND TITLES (10 LAND PARCELS)

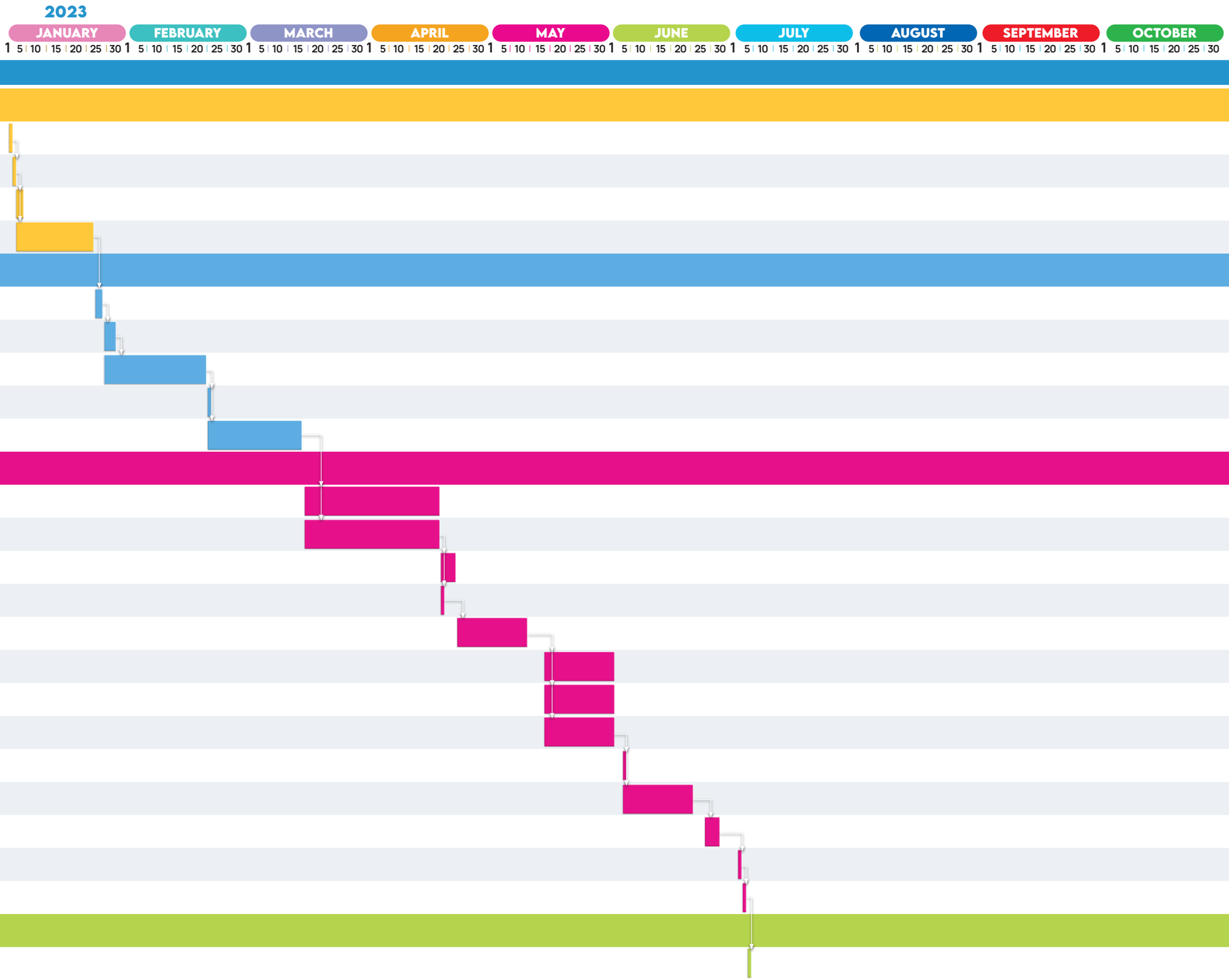
Legal descriptions, exhibits, and land titles (digital and hard copies)

Legal descriptions and exhibits will be prepared by CL survey and land titles will be acquired for the acquisition of temporary construction easements where required. For this proposal, a per private parcel cost has been provided which may be multiplied by the number of parcels for which temporary construction easements are required.

4 SCHEDULE

2023

ID	TASKS	DAYS	BEGIN	END
	SITE RESEARCH PHASE	17	1/2/23	1/24/23
1	Kick-Off Meeting	1	1/2/23	1/2/23
2	Research and Review Available Data	1	1/3/23	1/3/23
3	Utility Research and Notification (First Notice)	2	1/4/23	1/5/23
4	Topographic Survey	15	1/4/23	1/24/23
	PRELIMINARY DESIGN PHASE	37	1/25/23	3/16/23
6	Base Maps	2	1/25/23	1/26/23
7	Site Evaluation	2	1/27/23	1/30/23
8	30% PS&E	20	1/27/23	2/23/23
9	Submit 30% PS&E to City	1	2/24/23	2/24/23
10	City Review of 30% PS&E	15	2/24/23	3/16/23
	FINAL DESIGN PHASE	78	3/17/23	7/4/23
11	Right-of-Way Determination	25	3/17/23	4/20/23
12	65% PS&E	25	3/17/23	4/20/23
13	Utility Research and Notification (Second Notice)	2	4/21/23	4/24/23
14	Submit 65% PS&E to City	1	4/21/23	4/21/23
15	City Review of 65% PS&E	15	4/24/23	5/12/23
16	Utility Potholing (If Required)	15	5/15/23	6/2/23
17	Legal Descriptions and Exhibits (If Required)	15	5/15/23	6/2/23
18	90% PS&E	15	5/15/23	6/2/23
19	Submit 90% PS&E to City	1	6/5/23	6/5/23
20	City Review of 90% PS&E	15	6/5/23	6/23/23
21	100% PS&E	5	6/26/23	6/30/23
22	Submit 100% PS&E to City	1	7/3/23	7/3/23
23	Utility Research and Notification (Final Notice)	1	7/4/23	7/4/23
	FINAL DESIGN PHASE	1	7/5/23	7/5/23
22	Bidding and Construction Support	1	7/5/23	7/5/23



KEY PERSONNEL

MAJDI ATAYA, PE

QA/QC MANAGER

41 YEARS OF EXPERIENCE

FIELDS OF EXPERTISE:

WIDENING | ROADWAY | INTERSECTION | PAVEMENT | SIDEWALK

QUALIFICATIONS

PE #39392 Registered Civil Engineer | **BS: CIVIL ENGINEERING** California State University, Long Beach, 1981 **MPA: FULL COURSEWORK** California State University, Long Beach, 1993 | *former* **TAC CHAIRMAN** Orange County Transportation Authority | *former* **PRESIDENT** Engineer's Flood Control Advisory Committee | *former* **PRESIDENT & HONOREE** Engineer's Association of Orange County

BACKGROUND

Majdi is the Principal-In-Charge of Ownard Engineering. Majdi Ataya, Professional Engineer and Former Deputy Director and City Engineer for the City of La Habra's Public Works Department, is a seasoned engineer with over 41 years of solid and diversified experience in the public works sector. He is extremely familiar with the process of project management and design. He is a highly effective communicator and manager with an outstanding assimilation ability. Majdi is able to adapt and relate to all levels of management, and retain high energy levels and enthusiasm for the project at hand. Majdi understands the importance of excellent communication with public agencies and will be a dependable extension of your staff.

EXPERIENCE

DURFEE AVENUE & RAMONA BOULEVARD SIDEWALK IMPROVEMENTS PROJECT, EL MONTE

Majdi served as the QA/QC Manager for the City of El Monte with design engineering services for the Durfee Avenue & Ramona Boulevard Sidewalk Improvements Project (CIP No. 002). The project limits included two areas. The first was south side of Ramona Boulevard, between the eastern city limit - west side of San Gabriel River Trail – and Durfee Avenue (1,115 linear feet). The second location was on both sides of Durfee Avenue, between Ramona Boulevard and the address of 4000 Durfee Avenue (2,525 linear feet). The project had five main objectives. (1) reconstruct sidewalks, driveways, and curb ramps within project limits as necessary to comply with current ADA requirements. (2) identify surface utilities preventing ADA compliance and provide design alternatives that include constructing around the interfering utilities or relocating them. (3) evaluate existing infrastructure (sidewalks, driveways, and curb ramps) for adherence to current ADA requirements. (4) construct new ADA compliant sidewalk where absent. (5) ensure all improvements are constructed within the existing right-of-way.

LOS SERRANOS WIDENING & SIDEWALK IMPROVEMENT, CHINO HILLS

Majdi was the QA/QC Manager on the Los Serranos Infrastructure - ATP Project. The proposed project limits included the widening of ten rural residential streets in the Los Serranos area of Chino Hills. The project limits are located just west of the 71-freeway towards the east end of the City of Chino Hills. The project locations are surrounded by single family residential homes. The project is funded through the Active Transportation Program Project. Currently the Los Serranos area is very rural. The project limits include very minimal curb, gutter, and sidewalk. The ATP grant proposed provided funding for curb, gutter, and sidewalk on one side of each of the ten streets. The design included widening one side of the street on ten street segments within the City of Chino Hills.

LAKE FOREST DRIVE RESURFACING (BAKE PARKWAY TO I-5), LAKE FOREST

Majdi served as the QA/QC Manager for the City of Lake Forest on this project to prepare full design plans, specifications and estimates (PS&E) for this roadway resurfacing project located at Lake Forest Drive, between

Bake Parkway and the I-5 freeway. The project design plans were to be phased in order for the construction to be distributed into three phases as funding permitted. Along the approximately 5.5 mile stretch of road within the project limits, the phases required the construction of 152 ADA ramps and 22 ADA driveways in total and 7,105 linear feet of median curb height construction, along with the construction of bus pads, curb gutter and sidewalk repairs, and signing and striping replacement. The main objective is to improve the PCI of the street segments following our team's professional assessment of the existing pavement conditions in order to extend the street service life, improve safety by upgrading to safer streets with better ride quality and pedestrian access, minimize future maintenance costs and enhance aesthetics. This project is funded through Measure M2, SB1 and Infrastructure Reserves Funds.

NIGUEL ROAD STREET REHABILITATION, LAGUNA NIGUE

Majdi served as the QA/QC Manager for the City of Laguna Niguel on the Niguel Road Street Rehabilitation and ADA Improvement Project. The project consisted of rehabilitating an approximately 1.93 mile (10,200-foot) section of Niguel Road that extends from Alta Tera to Marina Hills Drive. Niguel Road from Highland Avenue to Marina Hills Drive (8,450 linear feet) is an arterial street with two lanes of traffic in either direction, raised center medians, centerline striping, left and right-turn pockets, and bike lanes. Niguel Road from Alta Terra to Highland Avenue is a residential collector street (1,750-feet) with one lane of traffic in both directions. A major part of this project involves the full design of the 64 ramps for the nearly 2 mile stretch hilly roadway. Parking was prohibited on the street except on the north side of Niguel Road from Alta Terra to Galina Way which required traffic management. Additional tasks included repairing curb, gutter, and sidewalk and constructing ADA compliant access ramps where required.

HEIL AVENUE & WARD STREET REHABILITATION & RESURFACING PROJECT, FOUNTAIN VALLEY

Majdi served as the QA/QC Manager for the City of Fountain Valley on the Heil Avenue and Ward Street Rehabilitation and Resurfacing Project. The street limits extend along two roadaways-around 5,200 linear feet (1-mile) from Euclid Street to Harbor Boulevard on Heil Avenue, and 700' from Edinger Avenue to the North City limit (150' north of Margarita Avenue) along Ward Street. The project is calling for OE's specialized detailed assessment of the roadway conditions and to draft a comprehensive analysis of the best potiential rehabilitation methods which includes verifying record drawings and data, evaluating pavement and concrete infrastructure conditions, identifying proposed private property improvements and requirements, and taking inventory of roadway signage and existing pavement markings. The site features, utility appurtenance locations, and street striping was documented by use of our drone. Substantial improvement needs within the street right-of-way include manholes; valve covers; utility vaults; poles; appurtenance and covers; signs and sign posts; trees; traffic signals and poles; local depressions; catch basins; fire hydrants; parkway drains; disrepaired curb, cross gutter and sidewalk; non-ADA compliant curb, ramp, and driveway; and signing and striping.

TORRANCE BOULEVARD RESURFACING FROM PCH TO PROSPECT AVENUE, REDONDO BEACH

Majdi was the QA/QC Manager for the Torrance Boulevard Resurfacing from Pacific Coast Highway to Prospect Avenue Project (Job No. 41230). The project consists of rehabilitating the section of Torrance Boulevard between Pacific Coast Highway (PCH) and Prospect Avenue (approximately 2,800 linear feet).The western limits of the project at Pacific Coast Highway is under the jurisdiction of Caltrans, requiring coordination to acquire an encroachment permit along with the submittal of a Traffic Control Plan for construction activities within the vicinity of the Caltrans Right-of-Way, along with designing improvements (i.e. curb ramps) in accordance with Caltrans Standard Plans and Specifications. Associated sub-tasks include constructing 22 ADA compliant curb ramps and driveways, upgrading pedestrian countdown heads, adjusting and relocating utility appurtenances, and replacing signing and striping. The project has a construction budget of approximately $950,000.

EUCLID STREET REHABILITATION & RESURFACING, FROM EDINGER TO WARNER AVENUE, FOUNTAIN VALLEY

Majdi served as the QA/QC Manager for the City of Fountain Valley on the Euclid Street Rehabilitation and Resurfacing Project, which was located on Euclid Street, from Edinger Avenue to Warner Avenue. Approximately 5200 linear feet (1 mile) of roadway required rehabilitation which involved curb, gutter and sidewalk reconstruction, 8 curb returns with ADA curb ramp and 5 driveways to be replaced, signing and striping replacement, and utility appurtenance adjustments. Aerial photographs of the street were captured for use in base map features which included utility appurtenance locations, digout areas, street striping configurations, and pavement limits, along with a topographic survey. The construction budget of this project totaled approximately $1.7 million.

JUSTIN SMEETS, PE, PLS, QSD

PROJECT MANAGER

17 YEARS OF EXPERIENCE

FIELDS OF EXPERTISE:

WIDENING | ROADWAY | INTERSECTION | PAVEMENT | SIDEWALK

QUALIFICATIONS

PE #78314 Registered Civil Engineer | **PLS #9293** Professional Land Surveyor | **QSD/QSP #00852** Qualified SWPPP Developer | **BS CIVIL ENGINEERING** CSUF, 2007 | **OCTA PAVEMENT REHABILITATION** (prior) Certification

BACKGROUND

Justin wields 17 years of experience involving civil engineering design, municipal engineering and facilities design, construction management and construction administration. Using AutoCAD Civil 3D, Justin handles the management and development of engineering plans and specifications and mapping. Justin additionally handles land development and grading design projects, conducted earthwork calculations, and incorporates typical designs. He is proficient in federally funded projects as well, and familiar with the Caltrans Local Assistance Procedures Manual (LAPM). Justin has successfully taken multiple projects from the initial federal funding application, to the Preliminary Environmental Study, to E-76 approval, and all the way through construction of audited federally funded construction projects. He has experience managing construction projects and handles planning and running kickoff meetings with the contractor, reviewing project submittals, RFIs, CCOs, and checking contractor invoices against field quantities. Justin ensures to coordinate the daily construction details with the contractor and inspector. He has completed multiple SWPPPs and erosion and sediment control plans per the latest Construction General Permit.

EXPERIENCE

DURFEE AVENUE & RAMONA BOULEVARD SIDEWALK IMPROVEMENTS PROJECT, EL MONTE

Justin was the Project Manager for the City of El Monte with design engineering services for the Durfee Avenue & Ramona Boulevard Sidewalk Improvements Project (CIP No. 002). The project limits included two areas. The first was south side of Ramona Boulevard, between the eastern city limit - west side of San Gabriel River Trail – and Durfee Avenue (1,115 linear feet). The second location was on both sides of Durfee Avenue, between Ramona Boulevard and the address of 4000 Durfee Avenue (2,525 linear feet). The project had five main objectives. (1) reconstruct sidewalks, driveways, and curb ramps within project limits as necessary to comply with current ADA requirements. (2) identify surface utilities preventing ADA compliance and provide design alternatives that include constructing around the interfering utilities or relocating them. (3) evaluate existing infrastructure (sidewalks, driveways, and curb ramps) for adherence to current ADA requirements. (4) construct new ADA compliant sidewalk where absent. (5) ensure all improvements are constructed within the existing right-of-way.

LOS SERRANOS WIDENING & SIDEWALK IMPROVEMENT, CHINO HILLS

Justin served as the Project Manager on the Los Serranos Infrastructure - ATP Project. The proposed project limits included the widening of ten rural residential streets in the Los Serranos area of Chino Hills. The project limits are located just west of the 71-freeway towards the east end of the City of Chino Hills. The project locations are surrounded by single family residential homes. The project is funded through the Active Transportation Program Project. Currently the Los Serranos area is very rural. The project limits include very minimal curb, gutter, and sidewalk. The ATP grant proposed provided funding for curb, gutter, and sidewalk on one side of each of the ten streets. The design included widening one side of the street on ten street segments within the City of Chino Hills.

DEL AMO BOULEVARD PAVEMENT REHABILITATION, CERRITOS

Justin was the Project Manager for the Del Amo Boulevard Project. Del Amo Boulevard is a major arterial oriented east/west and is used as a thoroughfare to adjacent cities. The project limits consist of a total of approximately 2,900 linear feet (approximately 0.55 miles) of Del Amo Boulevard between Pioneer Boulevard and Norwalk Boulevard. The south half is under the City of Lakewood's jurisdiction. Requirements included rehabilitation of pavement, concrete removal and replacement of damaged curb, gutter and sidewalks, identifying and addressing storm water drainage concerns, retrofitting curb access ramps with the latest ADA standards, and updating signing, striping and traffic loops. Close collaboration with the selected landscape architect was necessary to ensure all issues regarding tree root infiltration are addressed to accommodate both the civil and landscape designs and to ensure that the City receives a cohesive package of civil, landscape, and irrigation plans. The plans also included Low Impact Development (LID) Improvements to divert urban run-off from the storm drain system.

LAKE FOREST DRIVE RESURFACING (BAKE PARKWAY TO I-5), LAKE FOREST

Justin served as the Project Manager for the City of Lake Forest on this project to prepare full design plans, specifications and estimates (PS&E) for this roadway resurfacing project located at Lake Forest Drive, between Bake Parkway and the I-5 freeway. The project design plans were to be phased in order for the construction to be distributed into three phases as funding permitted. Along the approximately 5.5 mile stretch of road within the project limits, the phases required the construction of 152 ADA ramps and 22 ADA driveways in total and 7,105 linear feet of median curb height construction, along with the construction of bus pads, curb gutter and sidewalk repairs, and signing and striping replacement. The main objective is to improve the PCI of the street segments following our team's professional assessment of the existing pavement conditions in order to extend the street service life, improve safety by upgrading to safer streets with better ride quality and pedestrian access, minimize future maintenance costs and enhance aesthetics. This project is funded through Measure M2, SB1 and Infrastructure Reserves Funds.

NIGUEL ROAD STREET REHABILITATION, LAGUNA NIGUE

Justin provided Project Mangement services for the City of Laguna Niguel on the Niguel Road Street Rehabilitation and ADA Improvement Project. The project consisted of rehabilitating an approximately 1.93 mile (10,200-foot) section of Niguel Road that extends from Alta Tera to Marina Hills Drive. Niguel Road from Highland Avenue to Marina Hills Drive (8,450 linear feet) is an arterial street with two lanes of traffic in either direction, raised center medians, centerline striping, left and right-turn pockets, and bike lanes. Niguel Road from Alta Terra to Highland Avenue is a residential collector street (1,750-feet) with one lane of traffic in both directions. A major part of this project involves the full design of the 64 ramps for the nearly 2 mile stretch hilly roadway. Parking was prohibited on the street except on the north side of Niguel Road from Alta Terra to Galina Way which required traffic management. Additional tasks included repairing curb, gutter, and sidewalk and constructing ADA compliant access ramps where required.

BELLFLOWER BOULEVARD COMPLETE STREETS PROJECT, BELLFLOWER

Justin served as the Project Manager for the City of Bellflower on the HSIP – Bellflower Boulevard Complete Streets Project. The project consists of enhancing approximately 2,200 linear feet (0.42 miles) of Bellflower Boulevard from Artesia Boulevard to the South City Limit, approximately 330 feet south of Rose Street. Bellflower Boulevard is an arterial street with two lanes of traffic and curbside parking in both directions, a dual left turn lane, and traffic signals at high volume intersections. The project was partially funded by Cycle 9 of the Highway Safety Improvement Program (HSIP). The project has an estimated cost of $1,162,100. The street enhancements included adding Class III Bike Lanes, reducing the lane widths, adding raised medians with landscaping and irrigation, upgrading and adding high visibility crosswalks, rapid flashing beacons, and pedestrian countdown heads at the intersections, bulb-outs, and road resurfacing.

EUCLID STREET REHABILITATION & RESURFACING, FROM EDINGER TO WARNER AVENUE, FOUNTAIN VALLEY

Justin was the Project Manager for the City of Fountain Valley on the Euclid Street Rehabilitation and Resurfacing Project, which was located on Euclid Street, from Edinger Avenue to Warner Avenue. Approximately 5200 linear feet (1 mile) of roadway required rehabilitation which involved curb, gutter and sidewalk reconstruction, 8 curb returns with ADA curb ramp and 5 driveways to be replaced, signing and striping replacement, and utility appurtenance adjustments. Aerial photographs of the street were captured for use in base map features which included utility appurtenance locations, digout areas, street striping configurations, and pavement limits, along with a topographic survey. The construction budget of this project totaled approximately $1.7 million.

RYAN DENNIS, P. ENG.

PROJECT ENGINEER

17 YEARS OF EXPERIENCE

FIELDS OF EXPERTISE:

WIDENING | ROADWAY | INTERSECTION | PAVEMENT | SIDEWALK

QUALIFICATIONS

P.ENG. : APEGA Registered Civil Engineer | **BS: CIVIL ENGINEERING MINOR: ENVIRONMENTAL ENGINEERING** University of Calgary, 2005 | **CERTIFIED** AutoCAD & Civil 3D

BACKGROUND

As a Project Engineer for OE, Ryan leads the design team by performing and coordinating detailed designs on public works projects. Ryan has over 17 years of experience. He received his degree in Civil & Environmental Engineering from the University of Calgary and is a Registered Civil Engineer in Alberta, Canada. He possesses an ability to produce drawings, layouts, sketches, maps, and graphic representations of engineering designs. He also has extensive knowledge of AutoCAD Civil 3D. Ryan provides support during the overall engineering and design effort.

EXPERIENCE

DURFEE AVENUE & RAMONA BOULEVARD SIDEWALK IMPROVEMENTS PROJECT, EL MONTE

Ryan served as Project Engineer for the City of El Monte with design engineering services for the Durfee Avenue & Ramona Boulevard Sidewalk Improvements Project (CIP No. 002). The project limits included two areas. The first was south side of Ramona Boulevard, between the eastern city limit - west side of San Gabriel River Trail – and Durfee Avenue (1,115 linear feet). The second location was on both sides of Durfee Avenue, between Ramona Boulevard and the address of 4000 Durfee Avenue (2,525 linear feet). The project had five main objectives. (1) reconstruct sidewalks, driveways, and curb ramps within project limits as necessary to comply with current ADA requirements. (2) identify surface utilities preventing ADA compliance and provide design alternatives that include constructing around the interfering utilities or relocating them. (3) evaluate existing infrastructure (sidewalks, driveways, and curb ramps) for adherence to current ADA requirements. (4) construct new ADA compliant sidewalk where absent. (5) ensure all improvements are constructed within the existing right-of-way.

LOS SERRANOS WIDENING & SIDEWALK IMPROVEMENT, CHINO HILLS

Ryan was the Project Engineer on the Los Serranos Infrastructure - ATP Project. The proposed project limits included the widening of ten rural residential streets in the Los Serranos area of Chino Hills. The project limits are located just west of the 71-freeway towards the east end of the City of Chino Hills. The project locations are surrounded by single family residential homes. The project is funded through the Active Transportation Program Project. Currently the Los Serranos area is very rural. The project limits include very minimal curb, gutter, and sidewalk. The ATP grant proposed provided funding for curb, gutter, and sidewalk on one side of each of the ten streets. The design included widening one side of the street on ten street segments within the City of Chino Hills.

LAKE FOREST DRIVE RESURFACING (BAKE PARKWAY TO I-5), LAKE FOREST

Ryan served as Project Engineer for the City of Lake Forest on this project to prepare full design plans, specifications and estimates (PS&E) for this roadway resurfacing project located at Lake Forest Drive, between Bake Parkway and the I-5 freeway. The project design plans were to be phased in order for the construction to be distributed into three phases as funding permitted. Along the approximately 5.5 mile stretch of road within the project limits, the phases required the construction of 152 ADA ramps and 22 ADA driveways in total and 7,105 linear feet of median curb height construction, along with the construction of bus pads, curb gutter and sidewalk repairs, and signing and striping replacement. The main objective is to improve the PCI of the street segments following our

team's professional assessment of the existing pavement conditions in order to extend the street service life, improve safety by upgrading to safer streets with better ride quality and pedestrian access, minimize future maintenance costs and enhance aesthetics. This project is funded through Measure M2, SB1 and Infrastructure Reserves Funds.

NIGUEL ROAD STREET REHABILITATION, LAGUNA NIGUE

Ryan served as Project Engineer for the City of Laguna Niguel on the Niguel Road Street Rehabilitation and ADA Improvement Project. The project consisted of rehabilitating an approximately 1.93 mile (10,200-foot) section of Niguel Road that extends from Alta Tera to Marina Hills Drive. Niguel Road from Highland Avenue to Marina Hills Drive (8,450 linear feet) is an arterial street with two lanes of traffic in either direction, raised center medians, centerline striping, left and right-turn pockets, and bike lanes. Niguel Road from Alta Terra to Highland Avenue is a residential collector street (1,750-feet) with one lane of traffic in both directions. A major part of this project involves the full design of the 64 ramps for the nearly 2 mile stretch hilly roadway. Parking was prohibited on the street except on the north side of Niguel Road from Alta Terra to Galina Way which required traffic management. Additional tasks included repairing curb, gutter, and sidewalk and constructing ADA compliant access ramps where required.

BELLFLOWER BOULEVARD COMPLETE STREETS PROJECT, BELLFLOWER

Ryan is serving as a Project Engineer for the City of Bellflower on the HSIP – Bellflower Boulevard Complete Streets Project. The project consists of enhancing approximately 2,200 linear feet (0.42 miles) of Bellflower Boulevard from Artesia Boulevard to the South City Limit, approximately 330 feet south of Rose Street. Bellflower Boulevard is an arterial street with two lanes of traffic and curbside parking in both directions, a dual left turn lane, and traffic signals at high volume intersections. The project was partially funded by Cycle 9 of the Highway Safety Improvement Program (HSIP). The project has an estimated cost of $1,162,100. The street enhancements included adding Class III Bike Lanes, reducing the lane widths, adding raised medians with landscaping and irrigation, upgrading and adding high visibility crosswalks, rapid flashing beacons, and pedestrian countdown heads at the intersections, bulb-outs, and road resurfacing.

EUCLID STREET REHABILITATION & RESURFACING, FROM EDINGER TO WARNER AVENUE, FOUNTAIN VALLEY

Ryan served as Project Engineer for the City of Fountain Valley on the Euclid Street Rehabilitation and Resurfacing Project, which was located on Euclid Street, from Edinger Avenue to Warner Avenue. Approximately 5200 linear feet (1 mile) of roadway required rehabilitation which involved curb, gutter and sidewalk reconstruction, 8 curb returns with ADA curb ramp and 5 driveways to be replaced, signing and striping replacement, and utility appurtenance adjustments. Aerial photographs of the street were captured for use in base map features which included utility appurtenance locations, digout areas, street striping configurations, and pavement limits, along with a topographic survey. The construction budget of this project totaled approximately $1.7 million.

TRABUCO ROAD RESURFACING PROJECT (PEACHWOOD TO BAKE PARKWAY), LAKE FOREST

Ryan was the Project Engineer for the City of Lake Forest on the Trabuco Road Resurfacing Project for road resurfacing on Trabuco Road, between Peachwood Parkway and Bake Parkway. The work required the construction of 11 ADA ramps and 2 ADA driveways in total, median curb height construction, along with curb gutter and sidewalk repairs, and signing and striping replacement. The main objective is to improve the PCI for Trabuco Road following our team's professional assessment of the existing pavement conditions in order to extend the useful service life of the streets, improve safety by upgrading to safer streets with better ride quality and pedestrian access, minimize future maintenance needs and costs, and enhance aesthetics.

DAYTON LOWE

PROJECT ENGINEER

19 YEARS OF EXPERIENCE

FIELDS OF EXPERTISE:

WIDENING | ROADWAY | INTERSECTION | PAVEMENT | SIDEWALK

QUALIFICATIONS

BROWARD COLLEGE COURSEWORK Civil Engineering Technology & Construction Management | **OCTA PAVEMENT REHABILITATION** (prior) Certification | **CERTIFIED** AutoCAD & Civil 3D

BACKGROUND

As a Project Engineer for OE, Dayton performs and coordinates detailed designs on arterial roadways, utility coordination for major relocations on high profile projects and assistance in coordination efforts on multiple projects. He possesses an ability to produce drawings, layouts, sketches, maps, and graphic representations of engineering designs. He also has extensive knowledge of AutoCAD, Autodesk Civil 3D, Eagle Pointe Civil package and others. Dayton provides support during the overall engineering and design effort, including the preparation of design drawings and calculations. He is experienced in developing residential, commercial, and industrial conceptual site plans from the preliminary phase to final construction documents; knowledgeable in the design of gravity sanitary sewer systems; skilled in the design of sanitary sewer pump stations and force main systems; accomplished in the design of water mains for residential, commercial and industrial projects; practiced in the design of drainage systems; talented in preparing drainage calculations for effective and efficient drainage systems; and familiar in the design of grading plans for storm water drainage and ADA compliance. Dayton is also proficient in preparing and submitting packages to governmental agencies to obtain required permits for construction and in the design of roadway layouts including intersections, roundabouts, turn-lanes and travel lanes.

EXPERIENCE

DURFEE AVENUE & RAMONA BOULEVARD SIDEWALK IMPROVEMENTS PROJECT, EL MONTE

Dayton served as the Project Engineer for the City of El Monte with design engineering services for the Durfee Avenue & Ramona Boulevard Sidewalk Improvements Project (CIP No. 002). The project limits included two areas. The first was south side of Ramona Boulevard, between the eastern city limit - west side of San Gabriel River Trail – and Durfee Avenue (1,115 linear feet). The second location was on both sides of Durfee Avenue, between Ramona Boulevard and the address of 4000 Durfee Avenue (2,525 linear feet). The project had five main objectives. (1) reconstruct sidewalks, driveways, and curb ramps within project limits as necessary to comply with current ADA requirements. (2) identify surface utilities preventing ADA compliance and provide design alternatives that include constructing around the interfering utilities or relocating them. (3) evaluate existing infrastructure (sidewalks, driveways, and curb ramps) for adherence to current ADA requirements. (4) construct new ADA compliant sidewalk where absent. (5) ensure all improvements are constructed within the existing right-of-way.

LOS SERRANOS WIDENING & SIDEWALK IMPROVEMENT, CHINO HILLS

Dayton was the Project Engineer on the Los Serranos Infrastructure - ATP Project. The proposed project limits included the widening of ten rural residential streets in the Los Serranos area of Chino Hills. The project limits are located just west of the 71-freeway towards the east end of the City of Chino Hills. The project locations are surrounded by single family residential homes. The project is funded through the Active Transportation Program Project. Currently the Los Serranos area is very rural. The project limits include very minimal curb, gutter, and sidewalk. The ATP grant proposed provided funding for curb, gutter, and sidewalk on one side of each of the ten streets. The design included widening one side of the street on ten street segments within the City of Chino Hills.

DEL AMO BOULEVARD PAVEMENT REHABILITATION, CERRITOS

Dayton served as the Project Engineer for the Del Amo Boulevard Project. Del Amo Boulevard is a major arterial oriented east/west and is used as a thoroughfare to adjacent cities. The project limits consist of a total of approximately 2,900 linear feet (approximately 0.55 miles) of Del Amo Boulevard between Pioneer Boulevard and Norwalk Boulevard. The south half is under the City of Lakewood's jurisdiction. Requirements included rehabilitation of pavement, concrete removal and replacement of damaged curb, gutter and sidewalks, identifying and addressing storm water drainage concerns, retrofitting curb access ramps with the latest ADA standards, and updating signing, striping and traffic loops. Close collaboration with the selected landscape architect was necessary to ensure all issues regarding tree root infiltration are addressed to accommodate both the civil and landscape designs and to ensure that the City receives a cohesive package of civil, landscape, and irrigation plans. The plans also included Low Impact Development (LID) Improvements to divert urban run-off from the storm drain system.

NIGUEL ROAD STREET REHABILITATION, LAGUNA NIGUE

Dayton served as the Project Engineer for the City of Laguna Niguel on the Niguel Road Street Rehabilitation and ADA Improvement Project. The project consisted of rehabilitating an approximately 1.93 mile (10,200-foot) section of Niguel Road that extends from Alta Tera to Marina Hills Drive. Niguel Road from Highland Avenue to Marina Hills Drive (8,450 linear feet) is an arterial street with two lanes of traffic in either direction, raised center medians, centerline striping, left and right-turn pockets, and bike lanes. Niguel Road from Alta Terra to Highland Avenue is a residential collector street (1,750-feet) with one lane of traffic in both directions. A major part of this project involves the full design of the 64 ramps for the nearly 2 mile stretch hilly roadway. Parking was prohibited on the street except on the north side of Niguel Road from Alta Terra to Galina Way which required traffic management. Additional tasks included repairing curb, gutter, and sidewalk and constructing ADA compliant access ramps where required.

BELLFLOWER BOULEVARD COMPLETE STREETS PROJECT, BELLFLOWER

Dayton is serving as a Project Engineer for the City of Bellflower on the HSIP – Bellflower Boulevard Complete Streets Project. The project consists of enhancing approximately 2,200 linear feet (0.42 miles) of Bellflower Boulevard from Artesia Boulevard to the South City Limit, approximately 330 feet south of Rose Street. Bellflower Boulevard is an arterial street with two lanes of traffic and curbside parking in both directions, a dual left turn lane, and traffic signals at high volume intersections. The project was partially funded by Cycle 9 of the Highway Safety Improvement Program (HSIP). The project has an estimated cost of $1,162,100. The street enhancements included adding Class III Bike Lanes, reducing the lane widths, adding raised medians with landscaping and irrigation, upgrading and adding high visibility crosswalks, rapid flashing beacons, and pedestrian countdown heads at the intersections, bulb-outs, and road resurfacing.

TORRANCE BOULEVARD RESURFACING FROM PCH TO PROSPECT AVENUE, REDONDO BEACH

Dayton was the Project Engineer for the Torrance Boulevard Resurfacing from Pacific Coast Highway to Prospect Avenue Project (Job No. 41230). The project consists of rehabilitating the section of Torrance Boulevard between Pacific Coast Highway (PCH) and Prospect Avenue (approximately 2,800 linear feet).The western limits of the project at Pacific Coast Highway is under the jurisdiction of Caltrans, requiring coordination to acquire an encroachment permit along with the submittal of a Traffic Control Plan for construction activities within the vicinity of the Caltrans Right-of-Way, along with designing improvements (i.e. curb ramps) in accordance with Caltrans Standard Plans and Specifications. Associated sub-tasks include constructing 22 ADA compliant curb ramps and driveways, upgrading pedestrian countdown heads, adjusting and relocating utility appurtenances, and replacing signing and striping. The project has a construction budget of approximately $950,000.

TRABUCO ROAD RESURFACING PROJECT (PEACHWOOD TO BAKE PARKWAY), LAKE FOREST

Dayton was the Project Engineer for the City of Lake Forest on the Trabuco Road Resurfacing Project for road resurfacing on Trabuco Road, between Peachwood Parkway and Bake Parkway. The work required the construction of 11 ADA ramps and 2 ADA driveways in total, median curb height construction, along with curb gutter and sidewalk repairs, and signing and striping replacement. The main objective is to improve the PCI for Trabuco Road following our team's professional assessment of the existing pavement conditions in order to extend the useful service life of the streets, improve safety by upgrading to safer streets with better ride quality and pedestrian access, minimize future maintenance needs and costs, and enhance aesthetics.

DAVID LORIA

PROJECT ENGINEER

14 YEARS OF EXPERIENCE

FIELDS OF EXPERTISE:

WIDENING | ROADWAY | INTERSECTION | PAVEMENT | SIDEWALK

QUALIFICATIONS

FAA LICENSED #4098277 Commercial Drone Remote Pilot | **LEICA GEOSYSTEMS** Cyclone Point Cloud Processing Software | **EOS SYSTEMS** PhotoModeler Motion Photogrammetric Image Analysis/3D Modeling | **AUTODESK** Auto CAD, Civil 3D, Revit, 3D Max, Recap | **TOPCON** Scan Master Point Cloud Processing Software | **AS: 3D COMPUTER ANIMATION** Brooks College, Long Beach, 2004 | **CERTIFIED** AutoCAD & Civil 3D

BACKGROUND

David Loria has accumulated over 14 years of experience crafting his knowledge and skills in the survey and engineering industries that include CAD management, drafting and estimating, survey data and mapping, design analysis, base mapping, QA/QC checking, HD Laser scanning, 3D modeling and animation, forensic research, improving workflow pipeline methods, base maps, generating digital terrain models and accurate 3D line-work, and point cloud analysis and feature extraction, as well as advance photogrammetric modeling and analysis software. He has over 8 years of experience planning and performing site inspections and laser scans in the field, and analyzing, drafting, modeling and animating scenes for final presentations under strict deadlines. Other skills include drafting as-builts and record drawings for contract closeout submittals, and drafting base maps by combining survey data, Edison field inventory maps, public utility as-builts and other data for planning the removal, installation, replacement or repair of Edison electrical line, equipment or structures. David is proficient in multiple workflows depending on the needs and budget of a project to make sure it is completed on time and within budget.

EXPERIENCE

NEWPORT BOULEVARD WIDENING IMPROVEMENT, COSTA MESA

David worked as a Project Engineer to the City of Costa Mesa on the Newport Boulevard Widening Improvements Project. The project consists of widening a portion of 77 Fair Drive of southbound Newport Boulevard to accommodate a fourth through lane and improve its Level of Service from the current "F" rating (ranging from 1.10 to 1.30). The section of roadway to be enhanced extends approximately 2,700 linear feet southwest from 19th Street to the Superior Avenue turn-off located northeast of 17th Street. The project is located within Caltrans jurisdiction and requires traffic signal modifications, utility and street light relocations, and right-of way acquisitions to accommodate the additional through lane and right-turn pockets.

LAKE FOREST DRIVE RESURFACING (BAKE PARKWAY TO I-5), LAKE FOREST

David served as a Project Engineer for the City of Lake Forest on this project to prepare full design plans, specifications and estimates (PS&E) for this roadway resurfacing project located at Lake Forest Drive, between Bake Parkway and the I-5 freeway. The project design plans were to be phased in order for the construction to be distributed into three phases as funding permitted. Along the approximately 5.5 mile stretch of road within the project limits, the phases required the construction of 152 ADA ramps and 22 ADA driveways in total and 7,105 linear feet of median curb height construction, along with the construction of bus pads, curb gutter and sidewalk repairs, and signing and striping replacement. The main objective is to improve the PCI of the street segments following our team's professional assessment of the existing pavement conditions in order to extend the street service life, improve safety by upgrading to safer streets with better ride quality and pedestrian access, minimize future maintenance costs and enhance aesthetics. This project is funded through Measure M2, SB1 and Infrastructure Reserves Funds.

BELLFLOWER COMPLETE STREETS PROJECT, BELLFOWER

David is serving as a Project Engineer for the City of Bellflower on the HSIP – Bellflower Boulevard Complete Streets Project. The project consists of enhancing approximately 2,200 linear feet (0.42 miles) of Bellflower Boulevard from Artesia Boulevard to the South City Limit, approximately 330 feet south of Rose Street. Bellflower Boulevard is an arterial street with two lanes of traffic and curbside parking in both directions, a dual left turn lane, and traffic signals at high volume intersections. The project was partially funded by Cycle 9 of the Highway Safety Improvement Program (HSIP). The project has an estimated cost of $1,162,100. The street enhancements included adding Class III Bike Lanes, reducing the lane widths, adding raised medians with landscaping and irrigation, upgrading and adding high visibility crosswalks, rapid flashing beacons, and pedestrian countdown heads at the intersections, bulb-outs, and road resurfacing.

RESIDENTIAL STREETS PAVEMENT REHABILITATION PROJECTS-AREAS 1, 2, & 4, DOWNEY

David provided the City of Downey with Project Engineering services for the Residential Streets Pavement Rehabilitation Project for Areas 1, 2, and 4. The main objective was to improve the PCI of the area residential street segments in order to extend the street service life, improve safety, minimize costs and maintenance needs, and enhance aesthetics. In order to accurately develop a scope of work and fees for the design services, OE conducted a detailed field evaluation, a thorough review of the City's Pavement Management Plan, and approximated the costs for the construction activities to develop a final list of residential street segments. OE was then able to determine the quantity of streets that could be incorporated into the engineering design, which rehabilitation method to use and which method could be feasibly rehabilitated while adhering to the City's available budget, along with providing recommendations and estimates. Upon approval by the City, the team then began to prepare separate PS&E packages for each of the 3 zone areas. The resulting work required a total of 7, 500 feet of new and reconstructed curb, gutter and sidewalk along 21 residential street segments, with roadway improvements stretching .18 mile in Zone 1, 1.003 miles in Zone 2, and .22 mile in Zone 3. On a number of segments OE used straight grade between tie-in points at adjacent segments to maximized drainage slopes. A total of 164 Curb Ramps were reconstructed to meet ADA compliance along with 85 total driveways, in addition to street widening and single-sided street parking construction. Collaboration with Caltrans, LA County Flood Control District and Union Pacific Rail Road was also performed in order to acquire permit acquisitions on the segments.

TRABUCO ROAD RESURFACING PROJECT (PEACHWOOD TO BAKE PARKWAY), LAKE FOREST

David served as a Project Engineer to the City of Lake Forest to prepare full design Plans, Specifications and Estimates (PS&E) to the City of Lake Forest on the Trabuco Road Resurfacing Project for road resurfacing on Trabuco Road, between Peachwood Parkway and Bake Parkway. The work required the construction of 11 ADA ramps and 2 ADA driveways in total, median curb height construction, along with curb gutter and sidewalk repairs, and signing and striping replacement. The main objective is to improve the PCI for Trabuco Road following our team's professional assessment of the existing pavement conditions in order to extend the useful service life of the streets, improve safety by upgrading to safer streets with better ride quality and pedestrian access, minimize future maintenance needs and costs, and enhance aesthetics.

CITYWIDE ADA CURB RAMPS & PATH OF TRAVEL PEDESTRIAN ACCESSIBILITY IMPROVEMENTS, LONG BEACH

David served as a Project Engineer to the City of Long Beach involving Citywide ADA Curb Ramps and Path of Travel Pedestrian Accessibility Improvements. The objective of the project is to design and construct at least 20,000 new ADA compliant curb ramps over the next 20 years in accordance with current State and Federal accessibility codes and standards. The project is to complete 1,000 of those ramps deemed most critical for accessibility. OE's team utilizes AutoCAD Civil 3D on 3D surfaces for the designs in compliance with the Long Beach Standard Plan No. 122 in order to satisfy the maximum allowable slopes dictated in the most current version of Caltrans Standard Plan A88A, and has had to consider other accessibility standards due to occasional unavailability of a suitable ramp case and type. The project work entails the preparation of detailed individual curb ramp construction plans with the inclusion of horizontal geometrics, design elevations and dimensions, and utility appurtenance adjustments and relocations, along with concrete infrastructure such as curb, gutter, cross-gutters, and sidewalk. The necessary reconstruction is incorporated in order to accommodate the new curb ramps, meet accessibility requirements, and maintain drainage. Additional design elements have also required consideration, which involve constructing 32"x54" size flat landings next to each pedestrian push-button at signalized intersections and installing guardrails where retaining curbs adjoin walkable hard surfaces. Due to the large volume of ramps reconstructed each year, small batches of design details and construction of the ramps are being provided to the City at regular intervals through out a continuous process, with City submittals made on a monthly basis at a scaled frequency and quality.

RILEY MOORE, EIT

PROJECT ENGINEER

3 YEARS OF EXPERIENCE

FIELDS OF EXPERTISE:

WIDENING | ROADWAY | INTERSECTION | PAVEMENT | SIDEWALK

QUALIFICATIONS

EIT #174122 Engineer in Training | **BS: CIVIL ENGINEERING** California State Polytechnic University, Pomona, 2020
AS: ARCHITECTURAL DESIGN Orange Coast College, 2016 | **SOFTWARE PROFICIENCY** AutoCAD-Civil 3D-Microstation- Revit-Bluebeam-HDL

BACKGROUND

Riley is a recent graduate of California State Polytechnic University, Pomona in the field of Civil Engineering. She is an active Project Engineer with a penchant for design where she makes great use of her extended proficiency in utilizing the most up-to-date engineering design software, which includes AutoCAD, Civil 3D, Microstation, Revit, Bluebeam and HDL. Her main fields of development and expertise include Architectural Design, Transportation Engineering, Structural Analysis and Fluid Mechanics. Recently, for nearly the past 3 years, Riley served the City of Clarement where she developed her skills and knowledge involving the review and processing of plan checks for residential improvements, striping plans for City streets, permitting for public works, utility, grading, and oversized transportation, construction documentation, topographic mapping, line drawing, land development solutions and improvements, and basic project take-offs. In her active role she maintains a positive influence among her peers, with a robust interest in advancing her knowledge and skills within the industry.

EXPERIENCE

CITYWIDE ADA CURB RAMPS AND PATH OF TRAVEL PEDESTRIAN ACCESSIBILITY IMPROVEMENTS, LONG BEACH

Riley is providing Project Engineering services to the City of Long Beach involving Citywide ADA Curb Ramps and Path of Travel Pedestrian Accessibility Improvements. The objective of the project is to design and construct at least 20,000 new ADA compliant curb ramps over the next 20 years in accordance with current State and Federal accessibility codes and standards. The project is to complete 1,000 of those ramps deemed most critical for accessibility. OE's team utilizes AutoCAD Civil 3D on 3D surfaces for the designs in compliance with the Long Beach Standard Plan No. 122 in order to satisfy the maximum allowable slopes dictated in the most current version of Caltrans Standard Plan A88A, and has had to consider other accessibility standards due to occasional unavailability of a suitable ramp case and type. The project work entails the preparation of detailed individual curb ramp construction plans with the inclusion of horizontal geometrics, design elevations and dimensions, and utility appurtenance adjustments and relocations, along with concrete infrastructure such as curb, gutter, cross-gutters, and sidewalk. The necessary reconstruction is incorporated in order to accommodate the new curb ramps, meet accessibility requirements, and maintain drainage. Additional design elements have also required consideration, which involve constructing 32"x54" size flat landings next to each pedestrian push-button at signalized intersections and installing guardrails where retaining curbs adjoin walkable hard surfaces. Due to the large volume of ramps reconstructed each year, small batches of design details and construction of the ramps are being provided to the City at regular intervals through out a continuous process, with City submittals made on a monthly basis at a scaled frequency and quality.

292 UNIQUE ADA ACCESS RAMPS DESIGN, RANCHO CUCAMONGA

Riley provided Project Engineering services to the City of Rancho Cucamonga for a consecutive 3 years. These projects included approximately 292 total ADA ramps which required custom designs for each ramp.

The FY 17/18 project included approximately 125 ADA ramps, with 43 additional ramps added by the City. The FY 18/19 project included approximately 112 ADA ramps, with 15 additional ramps added by the City. The FY 19/20 project includes approximately 55 ADA ramps. The ramp work on these projects were completed on an expedited schedule and with short turnaround times.

EUCLID ROADWAY & SEWER RECONSTRUCTION PROJECT, FULLERTON

Riley provided Project Engineering services to the City of Fullerton on the Euclid Roadway and Sewer Reconstruction from Williamson to Fern Project. The project consisted of reconstructing or resurfacing approximately 3,700 linear feet of arterial streets between Fern Drive and Williamson Avenue and replacing approximately 1,700 feet of sewer mains between Malvern Avenue and Commonwealth Avenue. The sewer work included removing the existing 10-inch VCP and replacing it with new 12-inch VCP pipe between Commonwealth and Malvern and removing and replacing sewer north of Malvern to the end of the street project limits at Fern without upsizing. The worked also included removing the manholes at the center of the Euclid Street/Chapman Avenue intersection and establishing a new connection point approximately 50 feet to the east along Chapman Avenue as well as reconstructing the double barrel siphon and adjusting invert elevations to achieve a suitable slope. The design utilized a trenchless method to install the siphon beneath the OCPW Brea Creek Channel. Additional tasks included adjusting manhole elevations and reconnected service laterals, constructing new curb and gutter where gutter is absent, constructing ADA compliant curb ramps, and repairing curb, gutter, cross gutters, sidewalks and driveways where required. The City utilized SB1 funds for the road rehabilitation and local funds for the sewer improvements.

MANHATTAN BEACH BOULEVARD AND SEPULVEDA BOULEVARD WIDENING, MANHATTAN BEACH

Riley is providing Project Engineering services to the City of Manhattan Beach on the Manhattan Beach Boulevard and Sepulveda Boulevard Widening project. The proposed project limits include the intersection of Manhattan Beach Boulevard and Sepulveda Boulevard to accommodate dual left turn lanes in the northbound to westbound, eastbound to southbound, and westbound to northbound directions. The City of Lawndale is east of the project area, the City of Redondo Beach is south of the intersection, El Segundo sits to the north, and the Pacific Ocean to the west. Commercial businesses can be found throughout the project limits. The purpose of the project was to increase the operational capabilities of the intersection. This was accomplished by adding dual left turn lanes to the westbound, northbound and eastbound lanes. Northbound and southbound Sepulveda will have five travel lanes; two left turn lanes, and three through lanes. Eastbound and Westbound Manhattan Beach Boulevard will have five travel lanes; two left turn lanes, two through lanes and one dedicated right turn lane.

LOS NIETOS ROAD REHABILITATION PROJECT, SANTA FE SPRINGS

Riley is providing Project Engineering services to the City of Santa Fe Springs on the Los Nietos Road Rehabilitation Project. The project consists of rehabilitating approximately 2.3 miles of roadway on Los Nietos Road between Pioneer Blvd. and Painter Ave. The segment of Los Nietos was noted to be in poor condition. Widespread alligator cracking, block cracking, and potholing were observed throughout the project limits. The rehabilitation entailed available grind and overlay on the street segments and milling the full width of the street in areas where the deterioration was extensive. Our team also identified areas of isolated deterioration where digouts and milling the edges of the street may be necessary. Additional tasks include reconstructing curb, gutter, cross-gutters, and sidewalks in disrepair, as well as constructing ADA compliant driveways and curb ramps. Railroad right-of-ways intersect Los Nietos Road within the limits of the project. All design and construction activities within these right-of-way was coordinated with the PUC and carried out in accordance with the applicable PUC Codes.

BELLFLOWER COMPLETE STREETS PROJECT, BELLFOWER

Riley is serving as a Project Engineer for the City of Bellflower on the HSIP – Bellflower Boulevard Complete Streets Project. The project consists of enhancing approximately 2,200 linear feet (0.42 miles) of Bellflower Boulevard from Artesia Boulevard to the South City Limit, approximately 330 feet south of Rose Street. Bellflower Boulevard is an arterial street with two lanes of traffic and curbside parking in both directions, a dual left turn lane, and traffic signals at high volume intersections. The project was partially funded by Cycle 9 of the Highway Safety Improvement Program (HSIP). The project has an estimated cost of $1,162,100. The street enhancements included adding Class III Bike Lanes, reducing the lane widths, adding raised medians with landscaping and irrigation, upgrading and adding high visibility crosswalks, rapid flashing beacons, and pedestrian countdown heads at the intersections, bulb-outs, and road resurfacing.

JASON TO
PROJECT ENGINEER

5 YEARS OF EXPERIENCE

FIELDS OF EXPERTISE:

WIDENING | ROADWAY | INTERSECTION | PAVEMENT | SIDEWALK

QUALIFICATIONS

BS: Bachelor of Science-Civil Engineering, California State University, Fullerton | **SKILLS:** AutoDesk, AutoCAD, RAM Structural Systems, ArcGIS | **ROLES:** CAD Designer 1, Lab Engineer 1, Technical Specialist, Construction Manager

BACKGROUND

Jason To is an entheusastic Project Engineer and a recent graduate from Calfornia State University, Fullerton, earning a Bachelor's of Science Degree in Civil Engineering. He quickly followed this by taking on the role of Lab Engineer 1 and Technical Specialist for RMS Energy Consulting, where he provided projects scheduling, data analysis, drafted standard testing procedures for energy efficient appliances, and configured, calibrated and tested thermal couples equipment energy appliances for energy efficiency. In this role, Jason gained a wide range of design experience beginning with Soil Mechanics, where he determined properties of soil required for foundation design, then in Reinforced Concrete Design, where he designed and analyzed reinforced concrete structures, followed by Structural Steel Design, where he designed and analyzed steel structures. Jason also gained experience in Engineering Surveying, where he learned how to properly survey and use surveying equipment, as well as in Construction Management in learning how to create a project schedule and cost estimates with safety and reliability considerations through MS Project. His most recent position at Advantage Engineers allowed him work as a CAD Designer 1, where he designed and drafted zoning and construction drawings, site plans, red-line corrections, etc. for the purpose of wireless siting, and communicated drawing status and schedule to the Project Manager and other Team members, making him a team player along with his acquired design and management skills in the field.

EXPERIENCE

LAKE FOREST DRIVE RESURFACING (BAKE PARKWAY TO I-5), LAKE FOREST

Jason served as a Project Engineer for the City of Lake Forest on this project to prepare full design plans, specifications and estimates (PS&E) for this roadway resurfacing project located at Lake Forest Drive, between Bake Parkway and the I-5 freeway. The project design plans were to be phased in order for the construction to be distributed into three phases as funding permitted. Along the approximately 5.5 mile stretch of road within the project limits, the phases required the construction of 152 ADA ramps and 22 ADA driveways in total and 7,105 linear feet of median curb height construction, along with the construction of bus pads, curb gutter and sidewalk repairs, and signing and striping replacement. The main objective is to improve the PCI of the street segments following our team's professional assessment of the existing pavement conditions in order to extend the street service life, improve safety by upgrading to safer streets with better ride quality and pedestrian access, minimize future maintenance costs and enhance aesthetics. This project is funded through Measure M2, SB1 and Infrastructure Reserves Funds.

HEIL AVENUE & WARD STREET REHABILITATION & RESURFACING PROJECT, FOUNTAIN VALLEY

Jason served as a Project Engineer for the City of Fountain Valley on the Heil Avenue and Ward Street Rehabilitation and Resurfacing Project. The street limits extend along two roadaways-around 5,200 linear feet (1-mile) from Euclid Street to Harbor Boulevard on Heil Avenue, and 700' from Edinger Avenue to the North City limit (150' north of Margarita Avenue) along Ward Street. The project is calling for OE's specialized detailed assessment of the roadway conditions and to draft a comprehensive analysis of the best potiential rehabilitation methods which includes verifying record drawings and data, evaluating pavement and concrete infrastructure conditions, identifying proposed private property improvements and requirements, and taking inventory of roadway signage and existing

pavement markings. The site features, utility appurtenance locations, and street striping was documented by use of our drone. Substantial improvement needs within the street right-of-way include manholes; valve covers; utility vaults; poles; appurtenance and covers; signs and sign posts; trees; traffic signals and poles; local depressions; catch basins; fire hydrants; parkway drains; disrepaired curb, cross gutter and sidewalk; non-ADA compliant curb, ramp, and driveway; and signing and striping.

EUCLID STREET REHABILITATION & RESURFACING, FROM EDINGER TO WARNER AVENUE, FOUNTAIN VALLEY

Jason served as Project Engineer for the City of Fountain Valley on the Euclid Street Rehabilitation and Resurfacing Project, which was located on Euclid Street, from Edinger Avenue to Warner Avenue. Approximately 5200 linear feet (1 mile) of roadway required rehabilitation which involved curb, gutter and sidewalk reconstruction, 8 curb returns with ADA curb ramp and 5 driveways to be replaced, signing and striping replacement, and utility appurtenance adjustments. Aerial photographs of the street were captured for use in base map features which included utility appurtenance locations, digout areas, street striping configurations, and pavement limits, along with a topographic survey. The construction budget of this project totaled approximately $1.7 million.

FY 2022-23 ANNUAL PAVEMENT REHABILITATION PROJECT, PHASES 1-4, WHITTIER

Jason is providing the City of Whittier with Project Engineering services through 4 phases of their Annual Pavement Rehabilitation Project. The project purpose is to rehabilitate approximately 49,000 linear feet (9.3 miles) of 46 streets with a variety of slurry and cape seal, grind and overlay in order to achieve an extended pavement service life while minimizing future maintenance needs, improve safety and enhance aesthetics. The required work involved pavement, curb, gutter and sidewalk repair and rehabilitation, reconstructing 62 curb ramps (52 with missing truncated domes), replacing 9 cross gutters, utility appurtenance adjusting and relocating, signing and striping. The project also required Caltrans Encroachment Permits for streets around Whittier Boulevard, and for the Union Pacific Railroad (UPRR) due to street proximity to the right-of-way on the southwest end. OE's in-house Laser Scanner was utilized to capture visible indications of surface utilities, trees, utility poles, luminaries, fencing, walls, sidewalks, hardscape, signs, and edge of pavement lying within the ramp locations, as well as lip of gutter, flow-line, top of curb, and back of walk elevations were documented. The survey also extended beyond the ramp's BCRs/ECRs to ensure proper tie-in to the existing infrastructure.

ZONE 3 COLLECTOR ROAD IMPROVEMENTS, LAGUNA BEACH

Jason is providing Project Engineering services to the City of Laguna Beach for the development of Plans, Specifications & Estimates for street improvements of Park Avenue, from Glenneyre Street to Wendt Terrace; Glenneyre Street, from Park Avenue to Thalia Street; and Thalia Street, from Temple Hills Drive to the South End The City. The project consists of rehabilitating approximately 3,200 linear feet of Park Avenue, 2,500 linear feet of Glenneyre Street, and 2,500 linear feet of Thalia Street. Additional tasks include analyzing crown slopes at pedestrian crossings to reduce crossfall and steep crowns, as needed, along with utility adjustments, a record of survey on Thalia Street, a two-phase set of traffic control plans, and signing and striping. Traffic control and detour plan phasing is also included in order to accommodate the summer moratorium and for Thalia Street, OE prepared and filed with the County of Orange a Record of Survey showing the existing centerline from Temple Hills Drive to the southwest end.

CLARK AVENUE REHABILITATION PROJECT, BELLFLOWER

Jason is providing Project Engineering services to the City of Bellflower on the Clark Avenue Rehabilitation project. The project spanned 2,200 LF of arterial roadway from Artesia Boulevard to the South City limits. The scope of work included an inverted grind and overlay to reduce the crown height and provide more gradual grads at the edge of the roadway. The project also entailed a full-width ARHM overlay, localized full-depth reconstruction, installing 22 traffic loops, adjusting 22 manholes and 35 valves, metal hand-railing, curb & gutter, PCC driveways, and 11 curb ramp replacements to meet ADA compliance, as well as necessary traffic striping. Due to the projects close proximity to the City of Lakewood, OE was required to coordinate with both the City of Bellflower and the City of Lakewood.

5 FEE

ONWARD ENGINEERING
design smarter. build better.

Onward Engineering Fee Proposal to Provide:
Professional Design Services for the City of Fontana.
Street Improvement Project.

		ONWARD ENGINEERING					SUB-CONSULTANTS				GRAND TOTAL COST
		QA/QC MANAGER $200.00 HOURLY	PROJECT MANAGER $175.00 HOURLY	PROJECT ENGINEERS $140.00 HOURLY	OE TOTAL HOURS	OE SUB-TOTAL COST	SURVEYING SERVICES OZONE LS	GEOTECHNICAL SERVICES NOORZAYGEO LS	POTHOLING SERVICES C-BELOW LS	SUB-CONSULTANT SUB-TOTAL COST	TASK
TASK 1 - SITE RESEARCH PHASE											**TASK 1**
1.1	Kick-Off Meeting	4	4	4	12	$2,060.00				$-	$2,060.00
1.2	Bi-Weekly Progress Meetings (x10)		5	5	10	$1,575.00				$-	$1,575.00
1.3	Plan Check Meetings (x3)		3	3	6	$945.00				$-	$945.00
1.4	Research and Review Available Data		8	8	16	$2,520.00				$-	$2,520.00
1.5	Utility Research and Notification		8	32	40	$5,880.00				$-	$5,880.00
1.6	Topographic Survey		2	1	3	$490.00	$7,920.00			$7,920.00	$8,410.00
TASK 1	*SUB-TOTAL*	4	30	53	87	$13,470.00	$7,920.00	$-	$-	$7,920.00	$21,390.00
TASK 2 - PRELIMINARY DESIGN PHASE											**TASK 2**
2.1	Base Maps		2	16	18	$2,590.00				$-	$2,590.00
2.2	Site Evaluation		2	16	18	$2,590.00				$-	$2,590.00
2.3	30% PS&E	4	32	120	156	$23,200.00				$-	$23,200.00
TASK 2	*SUB-TOTAL*	4	36	152	192	$28,380.00	$-	$-	$-	$-	$28,380.00
TASK 3 - FINAL DESIGN PHASE											**TASK 3**
3.1	65% PS&E	8	32	120	160	$24,000.00				$-	$24,000.00
3.2	90% PS&E	4	24	80	108	$16,200.00				$-	$16,200.00
3.3	100% PS&E	2	8	40	50	$7,400.00				$-	$7,400.00
TASK 3	*SUB-TOTAL*	14	64	240	318	$47,600.00	$-	$-	$-	$-	$47,600.00
TASK 4 - BIDDING AND CONSTRUCTION SUPPORT PHASE											**TASK 4**
4.1	Bid Assistance and Construction Support (x16 Construction Meetings, RFI Response, As-Builts)	8	40	8	56	$9,720.00	$-	$-		$-	$9,720.00
TASK 4	*SUB-TOTAL*	8	40	8	56	$9,720.00	$-	$-	$-	$-	$9,720.00
OPTIONAL TASKS											**OPTIONAL**
5.1	Utility Potholing (Per Day; 5 Shallow or 2 Deep Boreholes)				0	$-			$7,000.00	$7,000.00	$7,000.00
5.2	Legal Description, Exhibit, and Land Title (1 Land Parcels)				0	$-	$3,630.00			$3,630.00	$3,630.00
OPTIONAL TASKS	*SUB-TOTAL*	0	0	0	0	$-	$3,630.00	$-	$7,000.00	$10,630.00	$10,630.00
TOTAL HOURS AND COSTS					653	$99,170.00				$18,550.00	$117,720.00