## UTILITIES101 – THE BASICS

## Robert G. Lee, P.E. STATE UTILITIES ENGINEER

## UTILITIES SECTION OF ROW BUREAU (4/9/09)

- Accommodation of Utilities on ROW
- Relocation of Utilities in Conflict w/ Highway Construction

## UTILITY MANUAL BASIS

- Federal Rules Federal Aid Policy Guide
  - 23 CFR 645 Parts A & B
- State Rules 2015 Highway Laws of Alabama



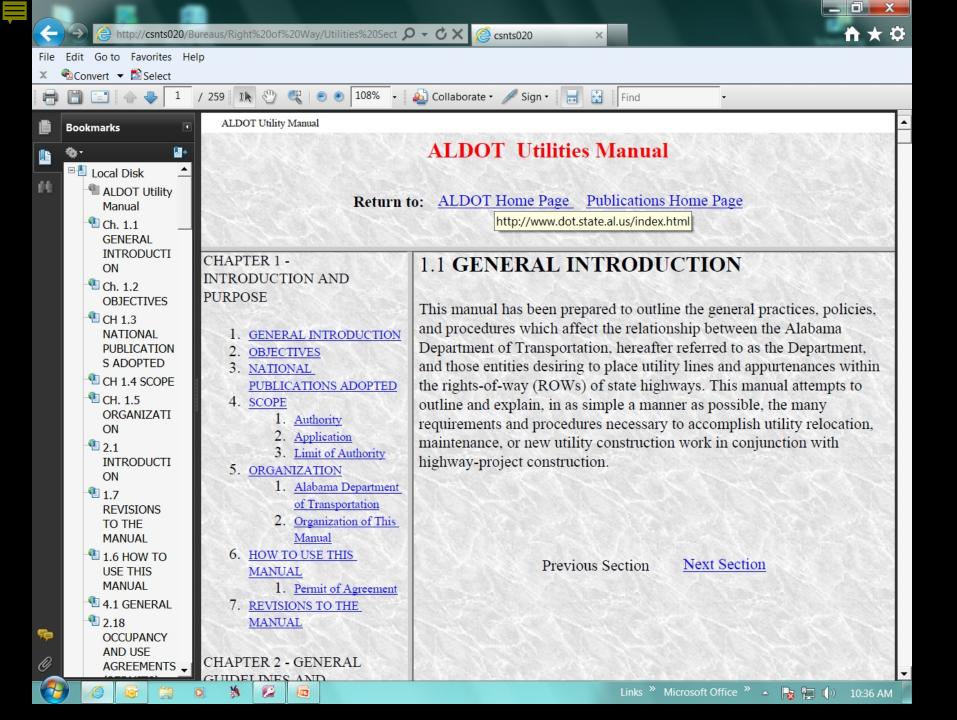
### **Utilities Forms**

### For the MANUAL click the following... Utilities Manual

Show 10 r entries Search:

Form#	Form Name	Description	Format	Date Revised
Buy America Certificate	Buy America Certificate	ALDOT Buy America Certificate of Compliance	.pdf	8-30- 2013
EXHIBIT N	EXHIBIT N	NOTE: SAHD 2 need to be attached hereto and made a part hereof	.pdf	10-23- 2012
EXHIBIT S	EXHIBIT S	<b>NOTE:</b> Certificate of Compliance with ACT 2016-312	.pdf	01-26- 2018
SAHD No1	Non-Reimbursable Agreement	For relocation of utility facilities on public ROW	.pdf	03-03- 2015
SAHD No12	Agreement to Terminate a Reimbursable	To cancel SAHD No2	.pdf	03-03- 2015
SAHD No2	Reimbursable Agreement	For relocation of utility facilities on private or public ROW NOTE: Exhibit N need to be attached hereto and made a part hereof	.pdf	09-05- 2017
SAHD No3	Reimbursable Agreement	For relocation of utility facilities on private or public ROW; Work to be done by State Contractor	.pdf	10-06- 2017
SAHD No4	Non-Reimbursable Agreement	For relocation of utility facilities on public ROW; Work to be done by State Contractor	.pdf	03-05- 2015
SAHD No6	Reimbursable Agreement	To Supplement an SAHD No. 2 Agreement in the case of a major cost overrun.	.pdf	09-05- 2017
Utilities Manual	ALDOT Utilities Manual	Outlines requirements and procedures necessary to accomplish utility relocation, maintenance, or new utility construction work.	.pdf	

Showing 1 to 10 of 10 entries



# UTILITIES CAN LOCATE ON ROW BY PERMIT

- Any Public Utility Can Request to Locate on Highway Rights-of-Way.
- As a General Rule, Utilities are Allowed to Locate on Highway ROW, but only Allowed to Cross Freeway (Interstate) ROW.
- Natural Gas and Electric Utilities ARE <u>NOT</u> ALLOWED TO ATTACH TO BRIDGES.
- Attachment by Other Utilities on a Case by Case Basis

## PERMITS ARE SPLIT BETWEEN UTILITIES SECTION & MAINTENANCE BUREAU

- Proper Permit see Utility Manual
- If there is no planned or active project permits go directly to Maintenance Bureau.
  - If that is the case, my signature will <u>not</u> be on the form.
- Authority to Approve a Majority of Permits has Shifted to the Region.

## • UTILITY RELOCATION

Utilities Are Often in Conflict with Highway Construction.

## **GDCP 2.02**

- Review Location Memorandum, Department commitments, and environmental document (if complete). Check for special problems, commitments, and major utility problems that may influence design. Special attention should be given to avoiding costly structures such as water tanks, cellular telephone towers, electric transmission facilities, other types of towers, etc.
  - Early in the Process Make an Effort to Avoid Utility Conflicts.
  - In Addition to Cost, <u>Time</u> Required to Relocate Utilities Should Be a Significant Factor of the Design.

### $\equiv$

## GDCP 9.02

 Transmit Title Sheet to the Office Engineer Bureau and request a construction project number.

# REGION / UTILITIES SECTION RECEIVE PLANS

GDCP #24 (Preliminary plans showing Construction & ROW Limits)

- Region Sends Plans to Utility Companies
- For Design Bureau or Consultant Management Plans are forwarded to Region to send out.

# PLANS ARE SENT TO UTILITIES ON THE PROJECT

- Utility Owners are asked to determine conflict.
  - Also asked to determine if all facilities are shown.
- If in Conflict Agreement to Relocate Submitted.
- If no conflict, Letter of Retention is Submitted.



#### Harris, Anna

From:

Ramey, Larry

Sent:

Friday, March 17, 2017 4:40 PM

To:

Harris, Anna

Subject:

RE: NH-0003(609), Shelby

Anna,

I don't have any information either. Best I could tell from Google view, I only saw one fan belt, one glove and one Walmart bag. There are a couple of inlets that will be tricky to work around, but that isn't a utility ©

Should be no conflict.

Thanks,

Larry (205) 581-5630 ShoreTel Extension 30054

# WHAT IS A UTILITY CONFLICT?

## Examples:

- Facilities Inside Construction Limits
- Inadequate Vertical Clearance of OH Utilities
  - 18' Over Highways
- Inadequate Cover
  - 4' Under Pavement
  - 3' Everywhere Else

# WHAT IS A UTILITY CONFLICT?

## Examples:

- Utilities Under Proposed Pavement or Shoulder.
- Above Ground Facilities Inside Clear Zone.
- Below Ground Clash Between Utility and Drainage Design.
- Physical Proximity No Direct Conflict, but Potential Damage to Utility by Construction.
  - Vibration

## RESOLVING CONFLICT

- Above Ground Utilities Relocated Out of the Clear Zone.
- Underground Utilities Relocated Out From Under Roadway Prism.
- Utilities that Cross the Highway Must be Encased to Protect the Highway.
  - Exception: Small Service lines 2" or less
  - Encasement Alternate for Natural Gas
- NATURAL GAS & ELECTRIC LINES CANNOT ATTACH TO BRIDGES.

# REIMBURSEMENT FOR RELOCATIONS

- On Interstate ROW all Conflicts are Reimbursable.
- On Federal Aid Projects:
  - Utilities Grossing < \$250 Million/Yr are Eligible.</li>
    - Corporate Earnings
  - Exceptions Private ROW or Easement (Prior Rights)
- State Funded Projects Only by Exception:
  - Prior Rights
  - Pauper

## TYPES OF AGREEMENTS

- SAHD No. 1 Non-reimbursable
  - Work usually done with company and/or company & contract forces.
- SAHD No. 2 Reimbursable
  - Work usually done by low bid contract.
  - Can be done by company forces, continuing contract or a combination of the three.

## TYPES OF AGREEMENTS

- SAHD No. 3 Reimbursable
  - Work done by the Roadway Contractor
    - Covered Under Construction Specifications.
- SAHD No. 4 Non-Reimbursable
  - Work done by the Roadway Contractor



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# FOR REIMBURSABLE RELOCATIONS

- Engineering is also eligible for reimbursement.
  - Engineering Agreement Submitted and Approved Before Utility Agreement.
  - EA's >\$150,000 require a pre-audit.
    - Recent Change from \$50,000 (2003 Policy)

## AGREEMENT APPROVAL

- Utility Sends to Region Office for Review / Recommendation
- Sent to Utilities Section for Review / Approval
- Approval by Legal Section
- Sent to Director / Governor
- Agreement to OE / FHWA
- Approved Agreement to Region
- Region Sends Approved Agreement to Utility

# OTHER FACTORS IN APPROVAL

- UT Project in CPMS if SAHD No. 2 Agreements
  - Budget is for the Sum of SAHD No. 2 Agreements.
  - Typically Given 2 Mos. Before CN Letting.
  - Single Authorization Pending
- Must Have Environmental Approval to get UT Agreements Approved.

Jefferson County Environment: 🔻

Southern Natural Gas

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# PLANS TO CONSTRUCTION BUREAU GDCP #95

- Utility Sheets May Not be Ready May Not Have All Agreements & Relocation Plans at 12 Weeks.
  - We are Still Trying to Keep Projects in the Letting Up Until 6 Weeks of Letting.
  - Region Lead on Most Projects Responsible for UT Sheets.
     Can Make a Complete Submittal.
- If We Don't Have the Agreements We Can't Complete the Utility Certificate Either. [Need Project () Number Too]

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# UTILITY CERTIFICATES ARE WRITTEN

- Status of the Agreement
- Defines who will perform the work.
- Describes the begin and end dates of the work.
  - Difficult to Identify When Work Will Begin When UT Certificate is Due <u>Before</u> Agreements are Approved.

# APPROVAL LEADS TO AUTHORIZATION TO PROCEED

- Work by company forces or continuing contract begins.
  - Must Have Right of Entry.
- Bids are Solicited for Low Bid Contract
  - Contract Docs Can be Reviewed While Agreement is in Approval Process.
- Construction Bureau Writes a Special Provision Based on the UT Certificate.

# IDEAL VS. REAL

- Plans are Often Not Sent to the Utilities Until <u>After</u> PIH.
  - Need Want More Complete Plans.
    - Don't Want the Utility Relocation Plans Based on Preliminary Plans.
      - Design Changes
      - Drainage Design Affects Utilities
    - Leaves Less Time for Utility Agreements to Be Approved Before Letting.

# APPROVAL OF AGREEMENTS

- Non-reimbursables are approved quickly.
- SAHD No. 3 Reimbursables Approved in a Timely Manner. (Funds Spent When Road Constructed).
- SAHD No. 2's There Can be Delays.
  - Request Early Authorization:
    - Relocations That Will Take >6 Months
    - Relocations Where Utility Will Have to Acquire New ROW or Easement.

# APPROVAL OF AGREEMENTS

- SAHD No. 2's There Can be Delays.
  - If Highway Project Can't Be Funded, UT Agreements May not be Approved.
  - Approval of a #2 Requires the Authorization of UT Project in CPMS.
    - Only One Authorization Can be Pending at a Time.
    - OE May not Make the Utility Submittal to FHWA Until <u>all</u> #2's are Received.

# DELAYS – CONTRACTOR CLAIMS

- If Utilities Don't Move in a Timely Manner it can lead to Contractor Claims.
  - Monetary
  - Time Extensions

# DELAYS – CONTRACTOR CLAIMS



## **HISTORY**

- FY '12 FY '17
  - SAHD No. 1 Agreements Approved 422
    - 19 Agreements Approved After Letting (4.5%)
  - SAHD No. 2 Agreements Approved 281
    - 51 Not Approved Before the CN Letting (18%)
  - Some SAHD No. 3's & SAHD No. 4'S are not approved prior to letting.

# CREDIT DUE AREA UT MANAGERS

- Good Working Relationship Between Utilities & Region Prevents More Contractor Claims.
- Non-Reimbursable Utilities Often Wait on Roadway Contractor to Clear the ROW Before Starting Work.
- We Have a Bit of Grace
  - One Month Between Authorization & Letting.
  - <u>></u> One Month After Letting for Contractor to Mobilize and Begin Work.

## COST OVERRUNS

- Schedule
  - CN Project Schedule Delays Can Lead to UT Overruns.
    - Some Agreements are Several Years Old Before Approved.
    - Agreements Approved But Work Does Not Start.

# ADDRESSING – CONTRACTOR CLAIMS

- Better Planning Don't go to CN Before UT's Have a Chance to Move.
- Early Authorization of Lengthy Relocates
- C & G Projects
- Include Work in Roadway Contract
- Incentive/Disincentive
- Consideration For Utility Authorization in Advance of Moving projects back into schedule.

## COST REDUCTIONS

- May Leave Minor Conflicts in Place.
  - Urban Projects No Places to Move Utilities.
  - Some Projects are on City Streets That We Will Not Have to Maintain.
  - City Streets Routinely Have Some Utilities Under Pavement.
  - Guidelines for Operation 3-14

# COST OF UTILITY RELOCATIONS

- Reimbursements \$20 to \$25 million / yr
- Timely Payment of Invoices
  - Utility Contractors Assn Law Requires 45 Day Payment.
  - More Competitive Bids

# NEW TECHNOLOGY/ BEST PRACTICES

- SUE Subsurface Utility Engineering
  - Can Accurately Locate Utilities.
    - Ground Penetrating Radar
    - Vacuum Excavation
- GIS Geographic Information System
  - Electronic Inventory of Utilities on the ROW
    - Accurate Information for Future Projects.
    - Help Prevent Permitting Utilities on Top of Each Other.
- 3D Modeling

# CHANGE ORDERS & SUPPLEMENTALS

- Design Changes
  - Lack of Current Plans
  - Sediment Ponds
  - Slope Changes /ROW Changes
  - Hydraulic Design
- Omissions Undetected Utilities
- Changed Site Conditions
- Bid Exceeds Estimate

## SUMMARY

- Focus on Utility Conflict Avoidance to Reduce Cost and Delay.
- Address Major Conflicts Early.
  - Decide When to Use SUE on Projects.
- For Major Utility Conflicts Consider Using a C & G Project to Move Utilities Before Going to CN.

## SUMMARY

### Details

- Project is Far From Ready to Let, When Region Submits Agreements to Central Office.
- CN Submittal May Not Always Contain Utility Sheets, w/o Policy Change.
- Less Costly to Identify Utility Conflicts in Advance of Construction.
- Timely Relocations
  - Can Reduce Contractor Claims.
  - Reduce Cost of the Work.
- Timely Payment Can Reduce Cost of Future Bids.

## PUBLIC SERVICE ANNOUNCEMENT

Don't Text & Drive



## NEW P.S.A.



## THANKS FOR LETTING ME SHED SOME LIGHT ON THE UT PROCESS

