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* Subject

* Analyze intra region urban area commutes.

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* Purpose

* This is a preliminary analysis triggered by the new Census methodology that incorporates LEHD data to determine appropriateness

* of lumping or separating urban areas.

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* Dependencies

* - commute

* - tl_2017_us_uac10

* - tl_2019_us_county

* - tl_2020_17_tabblock10

* - tl_2020_29_tabblock10

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* Notes

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* Assumptions

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* References

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* TODO

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SELECT "j_a"."year",
       "j_a"."jobs_total" AS "jobs_total_alton",
       "w_a"."workers_total" as "workers_total_alton",
       "c_a_sl"."workers_egress" AS "workers_egress_st_louis",
       "c_a_a"."jobs_local" AS "workers_remain_alton",
       "c_sl_a"."workers_ingress" AS "workers_ingress_st_louis"
FROM (
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SELECT "od"."year", SUM("od"."jobs_total") AS "jobs_total"
FROM "commute" AS "od"
WHERE "od"."type_code" = 'JT00' AND "od"."year" IN ('2016','2017','2018')
      AND "od"."workplace_geocode" IN (
          SELECT "t"."geoid10"
          FROM "tl_2020_17_tabblock10" AS "t"
          INNER JOIN (SELECT "geom" FROM "tl_2017_us_uac10" WHERE "geoid10" = '01765') AS "ua"
          ON ST_INTERSECTS("ua"."geom", "t"."geom")
      )
GROUP BY "od"."year"
) AS "j_a"
INNER JOIN (
    SELECT "od"."year", SUM("od"."jobs_total") AS "workers_total"
    FROM "commute" AS "od"
    WHERE "od"."type_code" = 'JT00' AND "od"."year" IN ('2016','2017','2018')
          AND "od"."residence_geocode" IN (
              SELECT "t"."geoid10"
              FROM "tl_2020_17_tabblock10" AS "t"
              INNER JOIN (SELECT "geom" FROM "tl_2017_us_uac10" WHERE "geoid10" = '01765') AS "ua"
              ON ST_INTERSECTS("ua"."geom", "t"."geom")
          )
    )

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GROUP BY "od"."year"
) AS "w_a" ON "j_a"."year" = "w_a"."year"
INNER JOIN (
    SELECT "od"."year", SUM("od"."jobs_total") AS "workers_egress"
    FROM "commute" AS "od"
    WHERE "od"."type_code" = 'JT00' AND "od"."year" IN ('2016','2017','2018')
        AND "od"."residence_geocode" IN (
            SELECT "t"."geoid10"
            FROM "tl_2020_17_tabblock10" AS "t"
                INNER JOIN (SELECT "geom" FROM "tl_2017_us_uac10" WHERE "geoid10" = '01765') AS "ua"
                ON ST_INTERSECTS("ua"."geom", "t"."geom")
        )
        AND "od"."workplace_geocode" IN (
            SELECT "t"."geoid10"
            FROM (
                SELECT "geoid10", "geom" FROM "tl_2020_17_tabblock10"
                UNION
                SELECT "geoid10", "geom" FROM "tl_2020_29_tabblock10"
            ) AS "t"
                INNER JOIN (SELECT "geom" FROM "tl_2017_us_uac10" WHERE "geoid10" = '77770') AS "ua"
                ON ST_INTERSECTS("ua"."geom", "t"."geom")

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        )
        GROUP BY "od"."year"
) AS "c_a_sl" ON "j_a"."year" = "c_a_sl"."year"
INNER JOIN (
    SELECT "od"."year", SUM("od"."jobs_total") AS "jobs_local"
    FROM "commute" AS "od"
    WHERE "od"."type_code" = 'JT00' AND "od"."year" IN ('2016','2017','2018')
        AND "od"."residence_geocode" IN (
            SELECT "t"."geoid10"
            FROM "tl_2020_17_tabblock10" AS "t"
                INNER JOIN (SELECT "geom" FROM "tl_2017_us_uac10" WHERE "geoid10" = '01765') AS "ua"
                    ON ST_INTERSECTS("ua"."geom", "t"."geom")
        )
        AND "od"."workplace_geocode" IN (
            SELECT "t"."geoid10"
            FROM "tl_2020_17_tabblock10" AS "t"
                INNER JOIN (SELECT "geom" FROM "tl_2017_us_uac10" WHERE "geoid10" = '01765') AS "ua"
                    ON ST_INTERSECTS("ua"."geom", "t"."geom")
        )
    GROUP BY "od"."year"
) AS "c_a_a" ON "j_a"."year" = "c_a_a"."year"

```

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INNER JOIN (
    SELECT "od"."year", SUM("od"."jobs_total") AS "workers_ingress"
    FROM "commute" AS "od"
    WHERE "od"."type_code" = 'JT00' AND "od"."year" IN ('2016','2017','2018')
        AND "od"."residence_geocode" IN (
            SELECT "t"."geoid10"
            FROM (
                SELECT "geoid10", "geom" FROM "tl_2020_17_tabblock10"
                UNION
                SELECT "geoid10", "geom" FROM "tl_2020_29_tabblock10"
            ) AS "t"
            INNER JOIN (SELECT "geom" FROM "tl_2017_us_uac10" WHERE "geoid10" = '77770') AS "ua"
                ON ST_INTERSECTS("ua"."geom", "t"."geom")
        )
        AND "od"."workplace_geocode" IN (
            SELECT "t"."geoid10"
            FROM "tl_2020_17_tabblock10" AS "t"
            INNER JOIN (SELECT "geom" FROM "tl_2017_us_uac10" WHERE "geoid10" = '01765') AS "ua"
                ON ST_INTERSECTS("ua"."geom", "t"."geom")
        )
    GROUP BY "od"."year"

```

```
) AS "c_sl_a" ON "j_a"."year" = "c_sl_a"."year"  
ORDER BY "j_a"."year";
```